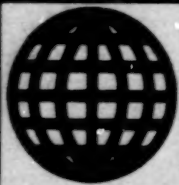


JPRS-UEA-68-017
16 MAY 1988



FOREIGN
BROADCAST
INFORMATION
SERVICE

JPRS Report

Soviet Union

Economic Affairs

Soviet Union Economic Affairs

JPRS-UEA-88-017

CONTENTS

16 MAY 1988

NATIONAL ECONOMY

ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Burlatskiy Discusses Ideology, Philosophy of Perestroika [Ye. Blinov; <i>LENINGRADSKAYA PRAVDA</i> , 7 Jan 88]	1
---	---

AGRICULTURE

AGRO-ECONOMICS, POLICY

Beginnings of Work Under Economic Self-Sufficiency	6
Basing of Pay on Final Results [T. Gorbatenko; <i>SELSKOYE KHOZYAYSTVO ROSSII</i> , No 12, Dec 87]	10
Problems in Shift to Self-Financing	13
Finance Chief Surveys Kemerovo Oblast APK [A. Gekov; <i>EKONOMICHESKAYA GAZETA</i> , Oct 87]	13
Response to Article [V. Galanin; <i>EKONOMICHESKAYA GAZETA</i> , Jan 88]	15
Farm Managers in Other Areas Respond [T. Yesilbayev, V. Pankratov and V. Shirukov; <i>PRAVDA</i> 15 Jan 88]	15

FORESTRY, TIMBER

Forestry Official Discusses Timber Industry Shortcomings [V. Antonov; <i>LESNAYA PROMYSHLENNOST</i> , 9 Jan 88]	16
--	----

ENERGY

ENERGY COMPLEX ORGANIZATION

Current Cleanup Operations at Pripyat, Chernobyl Described [V. Demidetskiy; <i>SOVETSKAYA MOLDAVIYA</i> , 17 Jan 88]	19
---	----

ELECTRIC POWER GENERATION

Baltic GRES Reconstruction Announced [Y. I. Kirillov interview; <i>SOVETSKAYA ESTONIYA</i> , 30 Jan 88]	20
Berezovskaya GRES-1 Construction Report [V. Komorin, N. Krivomazov; <i>PRAVDA</i> , 26 Dec 87]	22
Takhiatash GRES Unit 5 on Line [I. Nigay; <i>PRAVDA VOSTOKA</i> , 1 Jan 88]	23
Turukhanskaya GES Construction Condemned [Yevgeniy Gontmakher; <i>SOVETSKAYA KULTURA</i> , 31 Dec 87]	23
Talimardzhanskaya GRES Construction Report [PRAVDA VOSTOKA, 14 Jan 88]	24
Pribaltiyskaya GRES Reconstruction Reported [A. Yevgenyev; <i>SOVETSKAYA ESTONIYA</i> , 7 Jan 88]	24
Armglavenergo Head Interviewed [F. Akopdzhanyan interview; <i>KOMMUNIST</i> , 22 Dec 87]	25
Kureyskaya GES to Go on Line [A. Shcherbakov; <i>IZVESTIYA</i> , 26 Dec 87]	26

PIPELINE CONSTRUCTION, OPERATION

Pipeline Construction Plans Announced [A. M. Krayzelman; <i>STROITELSTVO TRUBOPROVODOV</i> , Jan 88]	26
---	----

MACHINEBUILDING

ORGANIZATION, PLANNING MANAGEMENT

Book Examines Dynamics of Price Formation in Machinebuilding [A. G. Gogoberidze and A. A. Deryabin; <i>PLANOVOYE KHOZYAYSTVO</i> , Feb 88]	31
Enterprise Ties Cannot Be Established by Direct Order	32

TRANSPORTATION

CIVIL AVIATION

Collegium Examines Trans-Siberian, Trans-Asiatic Routes [<i>VOZDUSHNYY TRANSPORT</i> , 31 Dec 87]	33
Irkutsk Airport Reconstruction [G. Denisyuk; <i>VOZDUSHNYY TRANSPORT</i> , 7 Jan 88]	34
Sheremetyevo Automatic Landing System Tested [D. Khrapovitskiy; <i>VOZDUSHNYY TRANSPORT</i> , 12 Jan 88]	34
USSR-Italy Air Agreement Signed [VOZDUSHNYY TRANSPORT, 12 Jan 88]	36
Trezubov Appointed Chief Magadan Aviation [VOZDUSHNYY TRANSPORT, 12 Jan 88]	36
New Kishinev Runway [VOZDUSHNYY TRANSPORT, 7 Jan 88]	37
Civil Aviation Minister on Restructuring [A. N. Volkov; <i>GRAZHDANSKAYA AVIATSIYA</i> , No 11, Nov 87]	37
Tupolev on TU-204 [A. A. Tupolev; <i>GRAZHDANSKAYA AVIATSIYA</i> , No 11, Nov 87]	41

MARITIME AND RIVER FLEETS

Maritime Fleet Minister on Restructuring [Yu. Volmer; <i>MORSKOY FLOT</i> , No 11, Nov 87]	46
--	----

ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Burlatskiy Discusses Ideology, Philosophy of Perestroika

18200099a Leningrad *LENINGRADSKAYA PRAVDA* in Russian]

[Interview of Fedor Burlatskiy, doctor of philosophy, by Yevgeniy Blinov, correspondent of the Novosti Press Agency: "Dialogue on a Topical Subject: Restructuring: Philosophical Problems"; time and place not specified; first paragraph is *LENINGRADSKAYA PRAVDA* introduction]

[7 Jan 88 p 2]

[Text] The ideological-theoretical conception of restructuring calls forth great interest among our readers. We offer for your attention a publication on this subject prepared by the Novosti Press Agency.

The Revolutionary Character of Restructuring—What Does It Mean?

Correspondent of the Novosti Press Agency Yevgeniy Blinov: We are talking about the revolutionary character of restructuring in the sense of the radical acceleration of social development on the basis of qualitative and structural changes of the socio-economic relations and all spheres of public life. In this connection, it is relevant to recall the statement of K. Marx in "Critique of the Gotha Program" to the effect that the period between capitalism and communism is a period of the revolutionary transformation of the first into the second. These words were cited by Lenin in his work "The State and Revolution." How do you understand the question of the revolutionary character of restructuring?

Doctor of philosophy Fedor Burlatskiy: I think that we should not approach the question of the revolutionary character of the restructuring from traditional positions. We are talking not only about the revolutionary character of the transition from capitalism to communism, which is not subject to any doubt. This Marxist idea was repeatedly expressed, to it they returned more than once. But now the revolutionary nature of restructuring has a completely concrete, and not a general-theoretical meaning. The point is that we are no longer satisfied with the system of the management of the economy that has taken shape and with the level of development of democracy in our society that we have attained, although we value it as an achievement of the new social order. But in the course of 20 years phenomena of stagnation have accumulated here in the USSR, we have begun to lag behind in the tempo of the realization of scientific-technical progress, and problems have appeared in our country in the social sphere and in the sphere of the development of democracy. All of this has also stimulated the formulation of the question of the necessity of transformations of a precisely revolutionary character.

Among Soviet theorists, one can encounter various interpretations of the revolutionary nature of the restructuring. Some, I would say, traditionalists regard the entire period of socialism as a revolution. But then the distinction between what is happening now and what happened 10, 10, and 30 years ago is blurred. I believe that only now can one talk about revolutionary reforms, about reforms which have a structural character and are aimed at the kind of change of the production relations that would make it possible, in the conditions of the rule of public property, to conduct the national economy more effectively than under capitalism. In other words, to attain the goal already set by Lenin—to surpass capitalism in terms of labor productivity.

Blinov: I believe that our small disagreement can be resolved by going over to the analysis of objective motive forces of the restructuring. You see, if this is a revolutionary period, then, with all the significance of the development of ideas, i. e., the subjective factor, an intensification of objective social contradictions must lie at its basis. And it may well turn out that the same contradictions which impart the revolutionary character to the restructuring operate during all of socialism.

Burlatskiy: Let us take a look at what it is that practically stimulates our revolutionary turning point. First of all, it is called forth by the necessity of the introduction of the achievements of the modern technical revolution in the economy, i. e., the new stage of the scientific-technical revolution, which began somewhere in the mid-1970's and is related to the appearance of microcomputers, information science as a whole, and new materials, with the development of nuclear energy, biotechnology, and, of course, space technology. Secondly, it is explained by the need to overcome the contradiction between the level of the development of the production forces and the character of the production relations in our society, that is the lag of the organization of management, the mechanism of the administration of the economy, as well as by the forms and methods of the management of society, behind the requirements of the present-day level of the development of the production forces.

Blinov: The contradictions you have touched on are obvious and indisputable. But since revolutionary transformations are carried out by people, it is important to trace how these contradictions are reflected in the social sphere.

Burlatskiy: Here it is impossible not to recall the fact that for many years the majority of Soviet philosophers were inclined to deny social contradictions under socialism. An attitude to social contradictions as something abnormal held sway, something which had to be overcome and liquidated as soon as possible. Meanwhile, the traditional view of Marxism in regard to contradictions is that without them there is no development. The thread of this idea is easily traced from Hegel—to Marx, from Marx—to Lenin, and from Lenin—to our days. Without contradictions, a society cannot be dynamic. Socialism is

distinguished on this plane from preceding social formations by the fact that it is free from antagonistic class contradictions. However, non-antagonistic contradictions play the same motive role in this development.

Contradictions that are now determining our development have basically developed because of the overestimation of the significance of centralization under socialism. Orienting ourselves mainly on the state forms of property, we oversimplified the structure of the production relations. We undervalued the cooperative, family, and individual forms of property, the development of which is capable of stimulating controversialism in society and, consequently, social progress. And this was already pointed out by Lenin in his work "On Cooperation." Another aspect of the problem is democratization. Lenin's statements, in particular from his work "The State and Revolution", to the effect that without democracy there is no socialism have been cited many times. However, our policy in regard to the development of democracy has not always been consistent. Now we understand that democratization is a fundamental condition for the improvement both of the socio-political system and the management of the economy, and for stimuli of its development. Here is the first and most important contradiction, which must be utilized in politics. The second contradiction concerns the correlation of the interests of the various classes, social groups, and individuals. For a long time, a conception held sway in Soviet philosophy about a kind of apriori given harmony in society and about the constantly growing unity of the individual and society, classes and social groups. But this was an oversimplification of the real relations. In actual fact, in our country, along with unity of the highest common interests, we also have contradictions, above all economic ones. A simple example: Workers are interested in seeing to it that industrial products are sold at a higher price, but peasants—in buying them at a lower price. The interests become opposite if we talk about agricultural products. To regulate these relations, a skillful policy is needed, whose task it is to take into consideration the interests of every class and to stimulate the growth of production.

Socialism, Its Basic Contradiction

Blinov: The return of Soviet philosophy to the ground of dialectics in the elaboration of the theory of socialism is a very important initial aspect, which promises it success. Moreover, it cannot be forgotten that Marxism regards the contradictions that secure the development of society, not as a sum, but as a system, i. e., in a certain relation and interdependency, in which the major role is played by the basic contradiction which permeates all spheres of social life. The philosophers have time and again discussed this problem, but there is no satisfactory solution of it up to now. How do you regard the problem of the basic contradiction?

Burlatskiy: I take a skeptical view of it. I consider it secondary, but this is an abstract question which is of significance only for those who are teaching philosophy, but not for those who are making policy. Of course, for a Marxist, the basic contradiction in its most general form is

always connected with the relationship between production forces and production relations. But during the period of the present revolutionary restructuring the most acute problem for us is the contradiction between planning and commodity-money relations, between plan and market. This is the central problem of all our economic reforms. Without finding the method for the utilization of this contradiction, it is impossible to move forward along the path of raising the efficiency of our economy. We have different points of view on this problem. There are the so-called "marketeers" (tovarniki), who recognize the role of the market under socialism, and the "anti-marketeers" (antitovarniki) (they are the basic mass), who believe that the qualitative characteristic of socialism is the plan, and that the market is something of a kind that has come from capitalism, that may be used to one degree or another, but the sooner we can get rid of it, the better. Many theorists as well as practical workers threaten with the consequences of the use of commodity-money relations, especially social consequences. Meanwhile this is a key question. In a number of socialist countries, for example in the People's Republic of China, the task of the creation of a model of plan-commodity economy has been advanced. Personally I sympathize with such an approach because I believe that plan and market are qualitative characteristics of socialist production.

There is a point of view, it has been expressed in our literary journals, that we must make a choice: Either plan, or market. I am deeply convinced that such a dilemma does not exist. It was invented. Here are two arguments in defense of my point of view. First of all, in the USSR, beginning with the 1920's, commodity-money relations have taken place along with the planned economy. We receive wages through money, and cost relations have existed and exist in our country. It is another matter that they are deformed, and we are facing the task of bringing the prices of goods closer to their real cost. Secondly, a commodity economy in pure form does not exist anywhere now, not even in capitalist society. In the leading industrially developed countries, 25-30 percent of the means of production are state property, and in some of them, for example, in Austria, significantly more. It is a well-known fact that in Japan and in the FRG the rise of the economy was secured through government policy, above all through a policy of investments, state orders, and credits, which stimulated the development of the most modern branches of production. And finally, the integration which we observe, let us say, in the "Common Market," is carried out through governmental decisions. The fact is that the state plays an increasingly greater role in the present-day economic process not only in the socialist, but also in the capitalist countries. In the conditions of modern production, the plan has already become a necessary factor of its organization. The difference, of course, is in the meaning and the content of the plan. In our country, it serves the rise of the prosperity of the people, and in capitalist countries—the increase of the profits of the monopolies. But there, as well as here, it must be based on the market as an objective social reality, for only the market guarantees the connection of the producer with the consumer and

determines the degree of the social utility of the expended labor. For the time being, the economy does not have another instrument for this purpose.

Blinov: I fully share your view on the role of commodity-money relations and the market under socialism. I think that the opposition—plan and market—is an expression of the basic objective contradiction of socialism in the sphere of the economy. But how does this contradiction express itself in the social sphere?

Burlatskiy: I have already spoken about the chief problem for us now, but what to call this contradiction—chief or basic—that is not the essential thing. The essence lies in the fact that the problem must be solved through socio-economic reforms, because only in this way can we lay the foundation for the creation of a more efficient model of socialism. As far as the social aspect of the indicated contradiction is concerned, this is an important question, but, unfortunately, a question which has not been researched. I imagine this as follows. Since the end of the 1920's the super-centralization of power and administrative methods of management began to take shape in our country. There were both objective and subjective reasons for this. Hence—the forced rates of collectivization, the development of heavy and defense industry. But on how this happened lies the imprint of the personality of Stalin. The industrialization, to a significant degree, was carried out at the expense of the peasantry. They began to underpay it for its agricultural produce, making use of the so-called "price scissors." This could not but give rise to certain problems in the relations between classes. Not accidentally collectivization was accompanied by an intensification of the class struggle, which partly was stimulated by this policy. Thus, the restoration of economic justice with respect to the peasantry serves at the same time to strengthen the alliance of the two working classes—the workers and the peasants.

Another social problem is bureaucratization. The excessive centralization of power led to the isolation of the rulers from the ruled. There appeared separate social interests of the ruling groups, and there appeared pressure groups. They, most probably, constitute the basic obstacle to the realization of reforms. However, I will make a reservation, I am not inclined to reduce the question of resistance to the reforms only to bureaucratism. Such an interpretation, in my view, would be one-sided, since there are passionate supporters of the reforms both in the broad mass of the people and in the apparatus of management, just as there are also opponents and those who are doubtful both there and here.

[8 Jan 88 p 2]

[Text]

The Individual and Society Correspondent of the
Novosti Press Agency Ye. Blinov: Socialism is a society

which, for the first time in history, sets as its deliberate goal the all-round development of the individual on the basis of the maximum satisfaction of his reasonable needs. Thus, the highest interests of the individual and society coincide, there is no antagonism between them, but this does not mean that there are contradictions. Soviet philosophy has for many years developed the aspect of the unity of the individual and society. Practical experience has led us to the acknowledgment of the fact that there is a contradiction between the individual and the collective, the collective and society, which in a generalized way can be expressed as a contradiction between the individual and society. How can this contradiction be explained and what is its role in the development of society?

Doctor of philosophy Fedor Burlatskiy: Here there really is a contradiction. You see, although society sets as its goal the satisfaction of the needs of the individual, in view of the inadequate level of development of the production forces it is compelled to carry out distribution according to work. At the same time, the individual cannot but strive for the satisfaction of all of his needs, but society his consumption by the measure of individual labor contribution. By increasing the quantity and the quality of his work, a person can increase his share in consumption. This is a powerful stimulus for increasing the social and productive activity of the individual, but on the condition that the distribution actually takes place according to work, i. e., that an objective measure is found to compare labor expenditures, and, secondly, that the prerequisites for the opening of all the capabilities of the individual are really created in the society. Here we again return to the role of democracy under socialism.

Distribution according to work embodies social justice during this stage of the historical development of society. It is precisely with it that the fate of the projected reforms, the fate of the restructuring, is now connected. However, the realization of this principle is giving rise to a social problem. The thing is that socialism in the ordinary consciousness has become firmly one with the patriarchal tradition of egalitarianism. And with it is connected such a psychological phenomenon as social envy (many do not think about the fact that they are living better, but about that others should not live better than they). These psychological clichés, it seems to me, are the largest obstacle on the road to restructuring, which assigns primary importance to equivalent distribution according to work with regard to quantity and quality and establishes the prerequisites of a certain social inequality. Without a doubt, distribution must be regulated by society, but at the same time we must clearly recognize that, without a policy oriented toward increasing inequality in consumption, an effective lever for a rise of production cannot be created. From my point of view, a basic mechanism for our dynamic development is economic competition. Competition between individuals, between labor collectives, and between various social groups.

Blinov: Tell us, someone among the Soviet philosophers is elaborating the question of the contradictions between the individual and society. How is it now put?

Burlatskiy: For the time being we are not ready to answer this question. For a long time, the attention of the social sciences was focused on all manifestations of harmony in socialist society, a point of view held sway which proceeded from the absence, in it, of a contradiction between the individual and society. Now it is evident that it was precisely that approach which became the theoretical basis of egalitarianism. Now we have realized the significance of distribution according to work. But this is only a principle. But how should it be applied in practice? Let us assume, a scientist or an inventor introduced a proposal that produced a multimillion profit. How much should he receive himself? In the West he would become a millionaire, but in our country he receives only a bonus. Proceeding from the principle of distribution according to work, we must guarantee him a certain and rather high percentage in order to stimulate his work in the future. At the same time, we cannot give him too much, since under socialism he cannot compile capital and turn into a rentier, who exploits someone else's labor. What should be the model here? For the time being, no one knows the answer. It is clear that inventiveness, enterprise, and creativity must be more broadly encouraged. At the same time, the progressive tax must be increased. This is clear in principle, but this question has not been elaborated theoretically or practically.

Blinov: Allow me to express some of my thoughts. The basic economic principle of socialism—"from each according to his abilities, to each according to his work"—obviously also signifies a basic economic relationship, and this relationship is between the individual and society. I would like to underscore the objective character of this relationship: The individual cannot live without working, the individual cannot receive more than he earns, but he can, as you have correctly noted, increase his share in consumption through the increase of the quantity and quality of his labor. Precisely this objective material force, above all, stimulates the activity of every individual and thus sets free enormous social energy, which secures the revolutionary development rates of socialism.

In our previous discussion, we talked about the significance of opposition—plan and market. This is truly the basic economic opposition of our society. But what does it signify? The plan is the highest economic expression of the interest of society, the market is the manifestation of the present interest of the individual. In other words: The opposition—"plan and market"—is the economic expression of the opposition of society and the individual. Let us take the public life of the USSR. The basic principle of its organization is democratic centralism. It lies at the basis of party organization, state institutions, and all public organizations. But it is nothing else than the political expression of the unity of the opposition of

society and the individual, i. e., the generalization of the interests of the individual through democracy and the realization of these interests through centralism. The unity of the opposition of the individual and society permeates all spheres of public life under socialism and finds its expression in each one of them individually. And this means, in my opinion, that the key to the solution of the problem of the basic objective contradiction must be sought precisely here.

How to Find the Truth?

Blinov: We are living through a time of especially bitter attacks on socialism by its ill-wishers. We say that socialism is the most humane social order. They say that it has moved man into the background, having subordinated him to an abstract social interest. We assert that the goal of socialist production is the material good of the individual. They answer: No, it does not serve the consumer. We are convinced: Socialism is democracy. They accuse us: You have created the most refined bureaucratic hierarchy. Previously in such cases we simply answered: Slander. Now we perceive in these accusations a share of truth. But what is this share? How did it happen that we deviated from the course? Obviously, it was not only our defects in theory which showed themselves here, but also the weakness of methodology. You see, the classics of Marxism, in analyzing complex social phenomena, strove above all to find their determining factor. In investigating the processes, they established a connection and interrelationship of the determining factors. Now Soviet social scientists are adherents of the so-called comprehensive method: They take phenomena in all their complexity and are often lost in it. How do you regard the method of research which is applied in our social sciences.

Burlatskiy: For me, this is not a question of a comprehensive approach, but a question of the correlation of systems analysis and dialectics. This is precisely the key question in the methodology of research. The classics of Marxism bequeathed to us a method for the investigation of any phenomenon and any process from the point of view of their contradictory qualities. Having exposed the contradictory essence of the phenomena, you receive an answer to the question concerning factors. During the past 20-25 years, systems analysis has come into practice in our country. In ordinary terms, this is also a comprehensive approach. But, I emphasize, in ordinary terms, i. e., when it is understood as the necessity to take into account all aspects of a phenomenon. For example, in the analysis of social life—to take into account its economic, social, political and cultural aspects. However, genuine systems analysis is a far more fundamental thing. It must without fail be dialectical. This means that it is focused on the analysis of contradictions, revealing their operation and mutual relations. The examination of the phenomena and the processes in the dialectical unity of the internal stimuli of development and the external phenomena with the isolation of the determining factors—such systems analysis is undoubtedly useful and correct.

Unfortunately, for a number of years many Soviet theorists interpreted systems analysis only in a structural-functional sense, and thereby it was transformed into methodological conservatism and stagnation. On the basis of such an analysis, conclusions were extracted for the management of society, for its deliberate regulation. As a result, the problems of management outweighed the consideration of the objective factors and the mechanisms of self-regulation ceased to operate. I have in mind production and social self-management and the self-regulation of production and consumption, technical progress, production quality, etc. In setting the task of the dynamic development of production and society, the CPSU has restored the dialectic in the form in which it was bequeathed to us by Marx and Lenin. The most important task of the social sciences is to master systems analysis on the basis of the dialectical method.

Blinov: Could you not name concrete cases where incorrect methodology has led us to serious practical errors?

Burlatskiy: I believe that an incorrect understanding of the contradictions of socialism as the most important engine of the process of development lay at the basis of the crises in a number of socialist countries: In Hungary—in 1956, in Czechoslovakia—in 1968, in Poland—at the turn of the 1980's, as well as the "cultural revolution" in China in the 1960's. For a long time, the contradictions under socialism were regarded mainly or almost exclusively from one point of view: As the reason for difficulties of the negative processes. In short, as something unfit that should be overcome as soon as possible or "liquidated" as they said. Such "liquidation" frequently came to the ignoring of real problems developing in society. To suggest that socialism is a non-contradictory society in which all conflicts are solved by mutual agreement, a society which is devoid of competition and struggle, is not only incorrect, but also dangerous. This is fraught with fundamental mistakes both in economic and in social policy.

Blinov: How, in your view, does the restructuring influence the situation in the social sciences?

Burlatskiy: The revolutionary restructuring, and this has been repeatedly emphasized by M. S. Gorbachev, must stimulate a theoretical break-through, especially in regard to the problems of contemporary socialism. We must look at it with open eyes, understand all the achievements of the new order, and all of its advantages over capitalism, as well as all the difficulties and problems that have arisen from practical experience. It is our duty to make a thorough analysis of our own development and the experience of the other socialist countries, as well as the practice of the countries of socialist orientation. For decades we have practically ignored the necessity of a constant comparative analysis of the development of socialism and capitalism (in its state-monopoly stage) and we have ignored the real problems of economic and technological competition, etc. A year

before his death, Lenin, in his article "On Cooperation," called on the party to reconsider "our entire point of view" ("Polnoye sobraniye sochineniy" [Complete Collected Works], Vol 45, p 376). At present we are faced with an analogous task. I am thinking of the concept of socialism as a whole, as they now often say, about the "model of socialism." Practice has already confronted us with the necessity of solving this question, but theoretically we have not answered it. What is the conception of socialism as a society, what are its fundamental features? The answer to these questions are all the more important because millions of people on the terrestrial globe still have not made their social choice and it will depend to a significant degree on our answer.

Blinov: In the situation that has now developed in the international arena, which feature of socialism do you regard as determining in the formation of the attitude of the mass of simple people to it?

Burlatskiy: Allow me to again refer to M. S. Gorbachev, who has time and again talked about the fact that not a single social system has the right to exist if it does not serve man. He has repeatedly emphasized the significance of the bases and principles common to all mankind for our policy and for the success of the cause of socialism, for the working class and the international workers' movement, for our domestic policy and the triumph of peace on Earth. I remember sharp statements by Marx against "crude" communism, which can only discredit this order. It is our task to assign primary importance to the question of the humane nature of socialism and to do this, not from the point of view wishes, but from the point of view of a fundamental characterization of it as a system. Socialism must in reality entirely serve the working man. In this connection, the elaboration of the problems of ethical socialism as an integral part of our scientific theory seems expedient to me. The task is to bring to light the objective conditions which determine the humane character of socialism and, above all, to show the humanism of the principle "from each according to his abilities, to each according to his work," which represents the highest manifestation of humaneness at the present-day level of the development of social relations. However, to proclaim this principle does not yet mean to build the entire social structure on it. We must achieve that this principle itself finds its realization in society and that the necessity does not arise of regulating it again and again with the help of a policy. What must be done for this? First of all, we must create conditions for the objective and equivalent distribution according to work, which is impossible without a certain level of the development of commodity-money relations. Secondly, we must realize democratization and self-government both in production and in the other spheres of social life. All of this will guarantee the correct combination of the interests of society and the individual and will raise socialism to a qualitatively new level.

AGRO-ECONOMICS, POLICY

Beginnings of Work Under Economic Self-Sufficiency

18240045a Moscow *EKONOMIKA SEL'SKOGO KHOZYAYSTVA* in Russian No 12, Dec 87 pp 62-66

[Article by I. Kablakhov, first deputy Chairman of the Stavropol Kray Agroprom [Agro-Industrial Association]: "First Work Results Involving Self-Financing Production"]

[Text] The second year of work of the kray's kolkhozes and sovkhozes under the conditions of the economic experiment is coming to an end. And although this is an extremely short period of time in which to make final judgements concerning the new management mechanism, nevertheless already today it would be useful to examine the effectiveness of some aspects of the new mechanism and to study the first experience of organizing work to assimilate experimental conditions.

The goal of the experiment is to approve the new economic mechanism, which will accelerate the pace of growth of agricultural production and improve quality. The main distinguishing characteristic of the new management mechanism consists of increasing the role of economic means on influencing the collectives of enterprises. It is for this purpose that enterprises are making the transition to self-financing production, which foresees that every enterprise achieves expanded reproduction by means of its own monetary sources, and first and foremost profits. We do not rule out the use of bank credit either, but under the condition that it is repaid in a timely manner.

Self-financing production means more than just a change in the regimen for financing the enterprise. It places the collective in economic circumstances under which the development of a material-technical base and of the enterprise's social infrastructure depend on the effectiveness of management. The economic experiment that is being carried out in the kray encompasses the most important aspects of socio-economic development of the entire collective. For this reason the transition to self-financing production presupposes an abrupt activation of the human factor. The relationship between individual labor activity and the management results of the corresponding collective are becoming more evident and clear to every individual worker. All of this develops an additional impulse in labor collectives to activate operations, and no less importantly, to participate in the management of the operations of the entire enterprise. At the same time growth in the activeness of labor collectives and of managers themselves can be implemented while increasing the independence of enterprises and their subdivisions and while democratizing the management process at all levels.

Consequently, self-financing production, independence and self-management are three indivisible, interrelated principles of the new economic mechanism. Therefore, it is not accidental that the experimental conditions together with self-financing production have foreseen resolutions that deal with expanding the independence of enterprises which, in turn, creates the necessary prerequisites for democratic administration (for details of experimental conditions see issue Number 8, 1986, of the journal).

Prior to the transition to the new management conditions it was often common to come across stereotypes that had developed in the course of many years in the thinking of many cadres with their consumerist approach, as expressed by the thesis, "plan less, acquire more capital." Inertness on the part of workers, an indifferent attitude in labor collectives and individual workers to the work results not only of the enterprise but of their own subdivisions as well were also observed.

For this reason kray and rayon organs have given special attention to training cadres and to having them assimilate new management conditions. Seminars have been carried out with directors and specialists of RAPO's [Rayon Agro-Industrial Associations], kolkhozes and sovkhozes to examine the basic aspects of the experiment — planning, financing, material stimulation, intra-enterprise cost accounting and collective contracts. The new rights of enterprises and labor collectives in all areas of management were studied in detail, including their economic responsibility to achieve self-financing production.

We also became convinced that study alone is insufficient, that life poses questions that are not foreseen by instruction. Thus, in order to render methodological aid four groups have been formed within the kray consisting of workers of the kray agro-industrial committee and scientists-economists. They work directly in rayons and enterprises to deal with basic questions that arise and to render aid in developing a shop structure of management, collective and family contracts, cost-accounting assignments, contractual agreements and others related to the transition to self-financing. By order of the kray agroprom specialists of the apparatus have been assigned to every rayon to render practical aid locally in carrying out the experiment.

The second important and complex subdivision of work to prepare for and carry out the experiment is related to the development of a normative base. Work towards self-financing production makes new demands on the degree to which profits left at the disposal of enterprises are valid. Now, when enterprises have the right to independently allocate these profits, this problem acquires special significance. Its solution requires the coordination of all, without exception, price and financial factors, procurement prices, supplements to them,

payments into the budget and deductions into centralized funds. The task consists of making sure an enterprise has the profits needed for self-financing work. This means that in substantiating all of the aforementioned factors it is essential to utilize norms that characterize the production potential of every enterprise.

The development of the necessary norms was begun a year prior to the transition to experimental conditions. It began with the implementation of land evaluation work in every enterprise and for every soil group; a point system was established for the economic assessment of the soil. At the same time norms were developed relating to the cost of the basic types of agricultural production. All of this provided the opportunity to more validly carry out calculations related to the distribution of experimental supplements to procurement price — the basic instrument for developing equal conditions for work toward self-financing.

But this was only the first stage in the development of the most essential norms. A system of interrelated norms is required for complete implementation of all experimental conditions. In 1986 measures were taken to expand the normative base. A comprehensive assessment was made of the production potential of rayons and enterprises, and on this basis normative volumes related to the procurement of agricultural products have been established. According to experimental condition these indicators are planned by enterprises independently (but not below the achieved level). Nevertheless, the necessity for objective information on possible volumes of sales of products to the state does not fall away. This kind of information enables us to make the correct decision relating to measures of economic influence (including material supply and capital investment) on kolkhozes, sovkhoses and the RAPO with the goal of stimulating them to take on intensive but real plan procurement. Normative indexes, characterizing procurement volume, are needed to no less a degree by enterprises themselves. They allow us to make judgements concerning the level of utilization of production potential and to orient labor collectives to improve their operations.

Of great importance are the norms on labor expenditures and wages. This is not the first year that work to provide a foundation for them is being carried out in the kray. In 1986 an improved variant was developed which characterized the expenditure of capital for the reimbursement of labor for every type of agricultural product in a cross-section of the main natural-economic zones in the kray. These norms will be utilized for planning the wage fund of enterprises as well as of their subdivisions.

The work to provide a new variant for normative cost price of the basic types of agricultural products is coming to an end. The special characteristic of these variants is that they reflect the production potential of enterprises

(assessment of land and so forth). They have been foreseen for plan activities of enterprises as well as for the refinement of the influence of price and financial factors.

Work to create a normative base does not end with this. Norms on standard capital intensiveness and material-technical supply of production are greatly needed. The activation of this work by the corresponding scientific institutions is essential.

The next division of measures to prepare and carry out the experiment involves supplying all of its participants with the necessary methodological materials. Experience has shown that in regard to official normative documents and instruction we need recommendations and guides that have been created with accessibility in mind so as to allow specialists of enterprises and the RAPO to utilize particular experimental conditions in a qualified manner with a consideration of specific conditions. Leading specialists of kray organs and VNIETUSKh [Expansion unknown] have prepared recommendations on questions related to financial security under conditions of self-financing production, to procurement planning, to the wage fund, to stimulation of labor, to the organization of intraenterprise accounting, to resolutions on the apparatus for RAPO management and others.

However, the main thing that the efforts of the experiment's participants are focused on is organizational work directly in enterprises. The following directions of organizational work are of special significance for achieving self-financing production:

—the assimilation of the achievements of science and progressive practice;

—the introduction of collective contracts in coordination with intraenterprise accounting and the check form of control;

—efficient control over economic-financial activities under conditions of self-financing production. The efforts of the kray's party, soviet and economic organs have been concentrated on dealing with the aforementioned tasks, which has facilitated positive changes in the agricultural economy.

The effectiveness and stability of production, and first and foremost of grain, have grown as a result of the joint utilization of intensive technologies. Grain crops were cultivated according to intensive technologies on 970,000 hectares, including winter wheat — on 900,000 hectares. Despite the year's complicated conditions in the kray's first zone the productivity of the intensive hectare was greater by 7.5 quintals than that of a regular hectare, and in enterprises of the second, third and fourth zones an addition of 10-12 quintals per hectare was achieved.

In the kray as a whole the productivity of grains comprised 26.2 quintals per hectare per harvest area, which is 2.6 quintals higher than planned. Yield of ears of corn equalled 25.8 quintals per hectare, and total grain yield exceeded 4.9 million tons, which is 1 million tons more than average annual production during the 11th Five-Year Plan.

The state has received 2,250,000 tons of grain, including wheat that consisted of 96 percent strong and valuable varieties. Additional supplements for grain sold above the annual levels of the 11th Five-Year Plan yielded over 40 million rubles.

According to the experience of the enterprises of Kirovskiy Rayon measures are being implemented to intensify feed production, to improve its structure and to introduce high-protein crops and multi-component mixtures. The area in repeat crops on irrigated lands is expanding. Last year 1,720 feed units each of coarse and succulent feeds were prepared for each standard head of cattle as compared to 1,470 in 1985, and in five rayons — over 2,000 feed units.

New management conditions have had a positive effect on the development of livestock raising. Produced were 353,600 tons of meat, which is 40,000 tons or 13 percent greater than 1985 levels. Gross milk yield comprised 809,400 tons, which is 7 percent greater than 1985 levels. Moreover, growth was fully achieved by means of increasing productivity. Above-plan sales to the government included 66,500 tons of milk, 23,000 tons of meat and 921 tons of pure-fiber wool.

Special attention is being given to the introduction of cost accounting, to improving the organization and reimbursement of labor and to production management. Making the transition to the shop management structure were 285 enterprises, or 70 percent of the total number.

Collective contracts have encompassed over 90 percent of farming and animal raising collectives. Work is being done to transfer auxiliary, subsidiary and service subdivisions to cost accounting.

A great deal of attention is being given to the assimilation of a wage system that will correspond to two interrelated management principles — counter-expenditure and self-financing. In the kray today we see two approaches to material stimulation for final results — a system based on norms related to gross income and a system of bonuses from a single source — the materials incentive fund created from profits (clear income).

The main feature of the first approach consists of the fact that the collective of each subdivision is stimulated depending on estimated gross income created in the subdivision. Since this index reflects the difference between the cost of gross production and material expenditures for this production, this method provides the

incentive for the collective to increase production output, to improve production quality and to decrease expenditures. Remuneration from gross income is utilized by Kazminskiy Kolkhoz, Kolkhoz imeni Oktyabrskaya Revolyutsiya and Kolkhoz imeni Balakhonov of Kochubeyevskiy Rayon, Zavety Ilich Kolkhoz of Grachevskiy Rayon and Pravda Kolkhoz of Izobilnenskiy Rayon and several other enterprises.

Material incentives from a single source are justified for the implementation of the principles of self-financing production and self-management. Here the enterprise's collective independently decides the question of distribution of profits (clear income) generated in the given year, for use and for saving. Total resources earmarked by the enterprise's collective for rewarding labor are allocated among subdivisions with a consideration of indexes from cost accounting operations.

The method of stimulating from a single source was conceived in Pobeda and Pravda kolkhozes of Petrovskiy Rayon. Progressive forms of stimulating labor have also had a positive effect on the achievement of high results in the production-financial operations of these enterprises. Pobeda Kolkhoz annually achieves high economic indexes without supplements to procurement prices. Whereas in 1981 2.7 million rubles of profits were generated here, in 1985 the figure equalled 3.7 million rubles. The level of profitability increased from 67 to 80.6 percent, and bonuses totalling 815,000 and 1,123,000 rubles respectively were paid from the fund of material incentives, or 48 and 60 kopecks per ruble of the basic wage.

The system of material incentives from a single source has found an application in Kolos Kolkhoz and Kolkhoz imeni Sarayev of Petrovskiy Rayon, Kolkhoz imeni Kalinin of Turkmenskii Rayon and a number of others. In 1987 this method was utilized by over 80 enterprises of the kray.

With the transition to self-financing production, methods of effective control over the production-economic activities of enterprises are subject to restructuring. The role of services involved in selling products and in finances and the significance of effective control over the activities of these services has increased. Special attention is being given to the control that is related to wage regulation, since the problem of adhering to the normative wage fund is becoming extremely acute. The solution to the problem is tied first and foremost to the assimilation of the counter-expenditure wage systems examined above.

Control over capital investments under conditions of self-financing production encompass two sides of this process: firstly, the timely accumulation of monetary resources earmarked for the expanded reproduction of capital and secondly, the timely avoidance of non-plan building and repair, of acquisition of excess technology and of increased costs in building-installation work.

Based on data obtained in the course of effective control, regulation measures are taken if necessary, including specific measures grounded in the principle of self-financing. Thus, when the amount of clear income is considerably lower than planned and the sum that is not achieved by year's end cannot be reduced, the enterprise's collective must make a decision on correcting the initial plan for the distribution of clear income. Such decisions can affect the curtailment of capital investments as well as deductions for consumption and above all for economic incentives funds.

Organizational forms of effective control and the glasnost of control are also of great importance. In many rayons data about self-financing is presented in posters to reflect the dynamics of the results of financial activity. A single accounting day is in effect that which enables us to effectively regulate financial mutual accounting with partners.

The coordination of economic methods and the effective work of all management links yields positive results. It is satisfying that not only qualitative parameters of development of the agricultural complex but quantitative as well are improving, that the style of work of economic cadres is changing and that labor and technological discipline and organization are increasing. An economic attitude toward the expenditure of capital is manifesting itself more and more clearly. The majority of directors and specialists have begun to calculate more strictly, to compute work results more systematically; they are keeping track of the financial status of enterprises.

Here is one characteristic example. Terskiy Sovkhoz of Budennovskiy Rayon was unprofitable until recently. Under the work conditions oriented toward self-financing expenditures throughout the enterprise decreased by 350,000 rubles as compared to 1985. Here checks were introduced involving water supplies to sheep-raising points, thereby creating a hindrance to misappropriation. The sovkhoz has refused to use the means of transportation of other organizations for this work. As a result it has achieved a savings of over 28,000 rubles. For the first time in recent years it has carried out sheep shearing without hiring other brigades, thereby decreasing expenditures by another 53,000 rubles. By installing meters and systematizing the expenditure of electrical energy the sovkhoz has saved over 6,000 rubles.

With a consideration of increasing the volume of production output the cost price of 1 quintal of milk decreased by 10 rubles and of wool — by 57 rubles in the sovkhoz. As a result in 1986 profits equalled 3.4 million rubles with a profitability level of about 60 percent. Loan debts decreased by over 1 million rubles.

We see such examples everywhere. Construction expenditures are decreasing as a result of the use of local materials; expenditures for maintenance of technology — as a result of better utilization. Last year only 3,000

motor vehicles were brought in from outside the kray for harvesting instead of the 7,000-10,000 of previous years, thereby saving over 5 million rubles.

The experience of the Put k Kommunizmu Kolkhoz of Stepnovskiy Rayon dealing with the certification of work places is worthy of attention; the results of this was that 20 tractors and 42 workers were freed, at a savings of 190,000 rubles. The certification work being carried out in all of the kray's kolkhozes and sovkhozes will yield a noticeable economic effect by means of freeing technology and workers of the management apparatus and by integrating professions.

Positive changes have been noted in production quality. The kray's enterprises have received an additional 28.6 million rubles from the sale of highly-conditioned livestock.

Differentiation of procurement prices had a positive effect on the quality of the sheep submitted for meat — prices were decreased for lean sheep and increased for sheep in above-average and average nutritional states. Whereas previously enterprises were eager to rid themselves of their sheep immediately after shearing if the animals were earmarked for meat purposes, now the delivery of sheep for preliminary fattening and pasturing has doubled. Last year 50 percent of the sheep herd was sold in an above-average or average nutritional state. Over 10 million additional rubles were generated.

Work under the conditions of the experiment has enabled us to somewhat strengthen the financial situation of kolkhozes and sovkhozes. By increasing production volume and selling products and by improving their quality enterprises that operate on principles of self-financing production generated over 200 million additional rubles. Profits comprised 576 million rubles as compared to the planned 472 million rubles; the profitability level reached 33.8 percent. According to the results for the year all enterprises participating in the experiment were profitable.

The availability of monetary resources in the kray's kolkhozes and sovkhozes as of 1 January 1987 increased by 140 million rubles. Short-term indebtedness decreased by 80 million rubles and credit loans decreased by 160 million rubles.

It is understandable that in the course of 1 year it was not possible to eliminate all existing shortcomings. Not all directors and specialists of enterprises utilize favorable opportunities created under experimental conditions.

The kolkhozes and sovkhozes of three rayons did not fulfill their plans for the production and delivery of grain to the state. Many enterprises did not deal with quotas involving the production and sale of meat, milk, sugar beets, sunflowers, vegetables and fruit. In addition to

underproduction of products kolkhozes and sovkhozes are bearing losses due to the low quality and high cost price of these products, especially of vegetables, meat, milk and wool.

Thirty five enterprises, or 9 percent, remain at a profitability level of up to 10 percent, and in 60 kolkhozes and sovkhozes profitability did not exceed 20 percent. All of this speaks of the fact that great intensive work remains to be done to introduce effective cost accounting, to strengthen the economy and to significantly improve production effectiveness.

New management conditions illuminate errors with special clarity and do not forgive them. It is noteworthy that labor collectives themselves now demand correction of these mistakes. All of this strengthens our belief in the fact that the positive tendencies noted during the first year of the experiment will be strengthened and developed.

An analysis of the first work results of the kray's kolkhozes and sovkhozes based on the principles of self-financing production has brought to light the necessity to clarify and introduce some changes in the conditions of the economic experiment. Let us look at some of these.

For sovkhozes that have made the transition to self-financing production, budget allocations are not made for socio-cultural building, and for this reason it is essential to extend to state agricultural enterprises the system of long-term credit for non-production objects that has been established for kolkhozes, i.e. for a period of 15 years with repayment beginning in the fifth year after the credit is extended.

It is expedient to finance expenditures related to natural conservation, to the development of new sovkhozes, to the agricultural assimilation of reclaimed lands and to the building of roads and the arrangement of meadows and pastures in mountainous regions by means of the budget and not by means of the ongoing activities of the enterprises in view of the capital-intensiveness and long period of return on these expenditures.

A normative approach should be introduced when determining the size of payments into the centralized union social security fund as related to the system established for reciprocal accounting with the budgets of sovkhozes and kolkhozes.

The question about control over the relationship between procurement prices for agricultural products and wholesale prices for industrial products sold to the kray's kolkhozes and sovkhozes has not been conclusively dealt with. Since 1983 the level of procurement prices for agricultural products has remained unchanged in the kray. At the same time prices for acquired technology continue to increase, and this is not always

compensated for by the corresponding growth in productivity. It is essential to establish a more precise system to compensate for the aforementioned supplementary expenditures.

COPYRIGHT: VO "Agropromizdat", "Ekonomika sel'skogo khozyaystva", 1987.

8228

Basing of Pay on Final Results
18240045b Moscow SELSKOYE KHOZYAYSTVO
ROSSII in Russian No 12, Dec 87 pp 8-19

[Article by T. Gorbatenko, candidate of economic sciences and N. Bannikova, graduate student at the Stavropol SKhI (Agricultural Institute): "For the Final Results"]

[Text] Probably for any individual this is one of the most painful problems — does the sum allocated within the department for wages, to reimburse those expenditures of physical and nervous energy required by work, reflect to the necessary degree the quality and quantity of labor? Conflicts in this area are not rare — and this is to state it mildly. But it is only in recent years that economists — scientists and practical workers — have begun serious work to deal with this problem.

Extensive work to improve material stimulation is being carried out in the enterprises of Stavropol Kray. Here the requirements of the 27th party congress on establishing closer ties between the size of wages and their labor contribution, on the strengthening of material and moral responsibility for shortcomings and omissions in work, on the direct dependence of wages on final national economic results were viewed as a mandate. Experience has already been amassed in the use of production output volume as well as gross and clear income as the measure of the final results. The system of wage payments with bonuses from a single source is becoming widespread in the kray.

The results of experiments are sufficiently convincing and enable us to select the most progressive system of wage payments with a consideration of the special features of a particular enterprise.

Nevertheless, there have been many cases in the kray in which the utilization of a better system of wage payments has not brought the expected results and has resulted in a decrease in material interest in final work results, in an overexpenditure of the wage fund and innegative effects on the moral-psychological climate in labor collectives.

The reason for this, first and foremost, is the imitation approach to the application of the experience of leading collectives, the attempt to mechanically translate already developed systems for the conditions of their own enterprise, the frequently low level of organization of production, planning and account-keeping work in enterprises,

and the attempt to correct the situation just by changing the wage system. However, improvements in material stimulation are not a panacea but only one of the elements among comprehensive measures to increase the effectiveness of production in general. Thus it is naive to put one's trust in being able to achieve somewhat noticeable results without improving intra-enterprise accounts, without the introduction of progressive forms of labor organization, without systematizing account-keeping, and without adhering to technological discipline.

The effective use of a particular system of wage payments is also hindered by the inadequate study of the merits, shortcomings and conditions for using each one. Let us try to fill this gap as much as possible.

At the present time in the country's agricultural enterprises the piecework-bonus system of wage payments is most widespread; here basic wages are paid according to piecework wage rates for production. According to results for the year contract collectives are awarded bonuses based on two main indexes — for achieving a level of production that is higher than the level achieved during the preceding 3-5 years (or for the overfulfillment of the quota), and for economizing on direct expenditures. Moreover, bonuses for workers can be drawn either from the material incentives fund or from capital of procurement organizations and processing enterprises.

It should be noted that this system has a number of shortcomings. First of all, it is very complicated — in addition to basic wages workers receive (or do not receive) numerous supplements, bonuses and additional payments depending on the achievement of particular indicators. All of this makes the piecework-bonus system difficult to understand and consequently inadequately effective because it is precisely the accessibility of the order and rules of material stimulation and their simplicity that are among the most important conditions for increasing the interest of workers in work results. Secondly, piecework orients the contract collective first and foremost toward increasing production volume whereas rewards for economizing on resources often bears a secondary, inessential nature. Thirdly, the methodology for calculating the wage rate is imperfect. Utilizing normative yield (productivity) that is determined according to the achieved level results in significant differences in the wage rate for the same production in enterprises of the same zone or rayon. Fourthly, the awarding of bonuses for above-plan production, which occupies a larger proportion in total bonus sums, interests collectives in accepting non-intensive plan quotas. And the awarding of bonuses for production output above the achieved level puts lagging collectives into a better position. Finally, there are considerable differences in the system for paying directors, specialists and rank workers, which often leads to conflict situations.

In comparison to the traditional piecework-bonus system, the wage system based on gross income has a number of advantages. First and foremost, it is a cost-accounting system in essence since contract collectives in

this case are interested in economizing on capital to the same degree as they are in increasing production output. Moreover, this system is sufficiently irreproachable methodologically and achieves the coordination of the pace of growth of wages and labor productivity. Here the size of wages does not depend on the degree to which the plan is fulfilled, which interests collectives in accepting more intensive obligations from the enterprise administration. The transition of specialists and directors to wages based on gross income encourages the establishment of common interests among all workers participating in production output.

But even this system has its "minuses." Although it can be included among those which are simplest to use, the transition to it involves a complex process of account-keeping of norms for deductions and their approval. This requires a relatively high level of training of workers in the planning-economic service. The introduction of wages based on gross income is possible only under conditions of well-organized account-keeping, great precision in the degree and specialization of primary subdivisions and the introduction of the check form of control.

The shortcomings of this system include the high level of dependence of wages on the conditions for the year, the possibility that a collective of separate subdivision can receive large supplements while the work results for the enterprise as a whole are negative and consequently the inadequate interest of individual brigades and links in the work results of the entire enterprise.

These shortcomings do not exist within the piecework-bonus wage system that includes bonus awards from a single source — the material incentives fund (FMP), which is utilized in a number of enterprises of Stavropol Krai which have made the transition to self-financing production. The aforementioned fund is created at a rate of 25 percent of profits after making payments into the budget, paying off loans to Gosbank and deductions into centralized reserve funds. Also directed into it are bonuses for increased production and sale of sugar beets and sunflowers transferred from the resources of processing enterprises and procurement organizations.

The material incentives fund that is created in this manner is utilized as a single source for rewarding all categories of workers. This enables the enterprise to unify the enterprise's collective and to orient it toward achieving large profits. Here interest in final work results of the primary subdivision is achieved by means of transfers of additional payments for production output to the collective.

The distribution of FMP resources among the collectives of brigades, farms and auxiliary production units and services is implemented in proportion to the wage fund corrected by a total percentage that reflects the fulfillment of the production output quota (the rendering of services) and economizing (overexpenditure) on the

limit of expenditures. This interests the collectives of subdivisions in increasing production output, in improving quality and in economizing on direct material-monetary expenditures. At the same time this kind of system gives rise to the necessity for strict controls over the expenditure of the wage fund in the course of the year in every subdivision, and the utilization of the total percentage increases demandingness with regard to the objectivity of intra-enterprise planning.

The fact that the size of the bonus can be considerable only under conditions of highly profitable production should be added to the list of advantages of this wage system. Thus, in Pobeda Kolkhoz of Petrovskiy Rayon, where the aforementioned index reaches 85 percent, bonuses from the single source equal 70-75 kopecks per ruble of basic wages on the average throughout the enterprise. If the profitability level does not exceed 35 percent then, according to our calculations, the size of the bonus can equal no more than 35-40 kopecks per ruble. At the same time, according to 1986 results, only one-third of the kray's enterprises had a profitability level over 35 percent, and 59 kolkhozes and sovkhozes did not reach even a 15-percent level of production profitability.

Still, despite the aforementioned shortcomings and special use features, the examined progressive wage systems have undoubtable advantages as compared to the model piecework-bonus system. Wages based on gross income or based on the utilization of a single bonus source are characterized by simplicity, comprehension and the possibility of increasing interest in final results. There is adequately convincing proof of this.

In order to evaluate and analyze the basic systems of material stimulation utilized in the kray we determined total 1986 wages for a single collective using the three wage systems (table). In making the calculations data was utilized from technological maps, cost accounting assignments as well as actual results of work for complex Number 2 of Kolkhoz imeni Oktyabrskaya Revolyutsiya of Kochubeyevskiy Rayon, which specializes in the cultivation of sugar beets. In this enterprise wages based on gross income have been in effect since 1983. Norms for deductions for wages were established on a level existing in 1979-1981. As a result it was determined that the collective, which was involved in the cultivation of sugar beets, would annually receive 20.4 percent of the gross income obtained.

Types of Wages	System of Wage Reimbursement		Model Piecework-Bonus		With the Utilization of a Single Bonus Source	
	From Gross Income					
	Thousands of rubles	percent	Thousands of rubles	Percent	Thousands of rubles	Percent
Intermediate wages in the course of the year	150.7	56.4	163.9	69.1	163.9	68.2
Supplementary payments and bonuses according to annual final results	116.4	43.6	63.5	30.9	76.6	31.8
Including:						
Supplements for production	x	x	32.0	13.5	32.0	13.3
Bonuses from FMP	x	x	29.2	12.3	x	x
Of these:						
For elevated production norms	x	x	17.7	7.4	x	x
For economizing on direct expenditures	x	x	11.5	4.9	x	x
Bonuses from FMP	-	-	12.3	5.1	44.6	18.5
Results	267.1	100.0	273.3	100.0	240.5	100.0

As a result of the transition to the new system of wages the production of sugar beets stabilized in the kolkhoz. Average productivity for 1983-1986 comprised 320 quintals per hectare, which is one-third greater than the levels for the 10th Five-Year Plan. The cost price, which until then increased constantly, decreased and equalled 2.51 rubles per quintal in 1985-1986. The proportion of wages in general expenditures for the production of sugar beets stabilized although it has a tendency to increase — whereas in the years of the 10th Five-Year Plan it fluctuated from 25 to 37 percent, during the last 4 years it has gradually increased from 26 to 30 percent.

In comparing results it is not difficult to note that the optimal structure is acquired by wages based on gross income — payments based on final results equal 43.6 percent within the structure of the wage fund, which is 58.6 percent greater than in the piecework-bonus system. This has occurred as a result of the 11.2 percent growth in the size of the annual wage fund as well as because of a decrease by 13,200 rubles in the size of the advance payment (in the kolkhoz supplementary wages are not calculated for the timely and quality fulfillment of work in the course of the year). An increase in the size of payments according to the results for the year attests to

the fact that wages based on gross income result in a greater degree of interest in the final results on the part of the collective.

At the same time the general income of the brigade in wages based on gross income turned out to be 30,200 rubles higher than with the model system. If we consider that actually the brigade has not received bonuses from the FMP then the difference could increase to 42,500 rubles. This can be explained only by the fact that during the period that has been called the basis for the calculation of norms for deductions for wages, the average productivity comprised 190 quintals per hectare, which is 78 percent lower than 1986 levels. During this period planned productivity increased to 290 quintals, whereas the norm included the same bonus share within the general wage. This is why the enterprise's economic service now has a foundation for reexamining the deduction norm, which for this year already comprised 17 instead of the initial 20.4 percent of total gross income generated by the subdivision.

The wage system utilizing a single bonus source is also significantly simpler and more accessible than the model piecework-bonus system although the structure of wages practically does not change. The general bonus size increases somewhat, which is based on the fact that when the single fund is allocated a correction coefficient is used that reflects the degree of participation of individual categories of workers in obtaining the final results.

The skilful use of the advantages of progressive systems of wages is one of the ways to increase the effectiveness of agricultural production. Thus, the introduction of a wage system based on gross income in Kolkhoz imeni Oktyabrskaya Revolyutsiya of Kochubeyevskiy Rayon, in addition to other measures, enabled it to significantly increase the volume of agricultural production output and to improve management indexes. The size of gross income here increased to 6.1 million rubles by 1986, which exceeds the levels for 1980-1982 by a factor of 2. The proportion of wages in gross income during this period decreased from 64 to 55 percent. As a result the size of annual profits increased from 0.9 to 2.3 million rubles. The profitability level in 1986 equalled 35 percent whereas in 1980-1982 this index hardly exceeded 16 percent on the average.

Thus we can speak with assurance about the fact that today practical workers have at their disposal sufficiently dependable and effective systems of wages that clearly coordinate collective wages and the individual labor contribution of each person with the final results of economic activities.

COPYRIGHT: "Selskoye khozyaystvo Rossii", No 12, 1987.

8228

Problems in Shift to Self-Financing

Finance Chief Surveys Kemerovo Oblast APK
18240044 Moscow *EKONOMICHESKAYA GAZETA* in Russian No 43 Oct 87 p 9

[Article by A. Gekov, department chief, Kemerovo Oblast Financial Administration: "On the Threshold of Self-Financing"]

[Text] *A look at the economic indicators in the Kemerovo Agroprom report for last year shows a fully satisfactory picture. Gross output was 1.6 billion rubles, higher than the previous year's level and plan indicators. Profits exceeded 170 million rubles, also higher than the plan and the previous year. In short, recently, with such results, the report could have been quietly put on the shelf. However, the agroprom is on the threshold of self-financing. Let us look at the report from this perspective.*

Even with their favorable economic situation, at the end of last year the oblast farms' were 40 million rubles short of circulating capital. They carried it over to this year.

The agroprom's deferred and defaulted debt to Gosbank totalled 365 million rubles, including 252 million in short term credits. Alarming, this is not declining, but increasing. Last year's growth was 170 million rubles.

If one assumes that the oblagroprom will set the goal of paying off part the debt over the next 5 years (at .75 million rubles a year), then in order to make the transition to self-financing it will be necessary to sharply increase gross output and simultaneously reduce production costs. As can be seen, the task is quite difficult. However, it can be solved.

HOW DO WE VIEW PRODUCTION COSTS?

In the past 25 years meat and milk production costs in the oblast have grown 2.5 fold. There are many reasons for this, including steady increases in prices for construction materials and equipment. However, the situation is made more difficult because increases in agricultural production costs were not limited by anyone or anything, there were no mechanisms for restraining them. Rural workers' earnings, for example, have grown at the same rates. That is, the economic mechanism promotes the cost driven character of the agricultural economy.

Even today, although condemned, it still lets itself be known. Also, for many years we have taught managers not to object very much about this mechanism. As production costs increased and "ate up" profits, we introduced supplementary payments and mark-ups and increased purchase prices. Then production costs increased again and again "ate up" profits, even with the mark-ups. New "injections" were given.

Initially these were purchase prices differentiated so finely that even farms in a single rayon had different prices. Then there were mark-ups for increased livestock weight. To stimulate plan fulfillment there were 50 percent mark-ups on above-plan output, and later these mark-ups were paid for exceeding the levels attained in the previous five years. Starting in 1986 they were increased by 100 percent. Finally, mark-ups were added to purchase prices paid to low profit and money losing farms.

However, none of these measures provided incentives to reduce production costs. They had no influence upon them at all. Moreover, this approach created indifference and tranquility among some managers and specialists at kolkhozes and sovkhoses. Since 1983 low profit and money losing farms in the oblast have annually been paid 55 million rubles in the form of mark-ups over purchase prices. If they had received money only for the results from operating activities, in that year they would have received 60 million rubles in profits and in 1986 only 29 million — half as much.

A similar situation has been going on for years with regard to credits. The painful procedures for obtaining them initially led to their default then to their deferral, and finally to their being written off.

Now the oblagroprom's annual report indicates 57 million rubles indebtedness for Gosbank loans. Actually, this debt is 1,160,000,000 rubles: 795 million rubles are not due, the remaining are defaulted or deferred.

One can say: yes, it was so, but now everything is changed and an anti-cost mechanism has been developed for the the agroprom. Actually, this year, following a decision by USSR Gosagroprom all sovkhos and workers will be paid out of gross income. It must be said that this is quite a simple anti-cost mechanism and is quite well known. Each ruble of income and expenditure are balanced as if on a scales.

However, without a collective contract it will not be introduced — this is also a simple truth at first glance. But, shouldn't we look at what got us to this situation and see how good our cost accounting system is? There is no need to list all its principles here, as they are known. However, its individual elements are used separately and, consequently, do not reflect its essential feature — its anti-cost character.

Take just one component — material incentives for economizing on equipment and resources. The statute on cost accounting provides for them, but they often do not reach, or only formally reach each link member and worker. There are very few instances where workers clearly know what they obtained from such economizing and what they lost from negligence. Moreover, in the many years since cost accounting was introduced in the oblast not a single worker has lost pay because of overconsumption of material resources, although farm

production costs are growing yearly. There was interest in the material incentives system for economizing on materials in Chebulinskiy, Izhmorskiy, Tyazhinskiy and Krapivinskiy rayons. At the year's end some sovkhoses paid bonuses for this. However, these sums were miserly and the economies and payments for them were so far apart that rank and file workers could not recall why they had received the bonuses and what and how much they had economized upon.

The oblast agrocommittee deemed it necessary to set up, in each rayon, one base farm where an anti-cost mechanism should be developed. The same thing is being done at all industrial and service enterprises in the agroprom.

WHERE TO INVEST A RUBLE?

Today managers at many farms stress that they are constructing many things. However, they often complain about construction difficulties: not enough materials, problems in finding contractors. Seldom do they analyze where to invest the kolkhoz or sovkhos ruble.

Yes, many things are being built. Studies show that last year in the oblast the general limit on capital investments was 131 percent utilized and that 380 million rubles from all sources of financing were used for construction. The share used for technical reequipment increased from 43 to 48 percent. The limit for the construction of crop and animal production facilities was exceeded 1.5 fold. Just where were these resources invested?

At the beginning of last year the capacity of animal facilities in the oblast exceeded the cattle population by 13 percent, for pigs the figure was 23 percent and for poultry — 34 percent. However, the plan for the introduction of cattle facilities was 66 percent overfulfilled and that for pigs, 6 fold overfulfilled. What is the reason? We do have extravagance, or lack of knowledge, but who doesn't?

At the same time more than one third of the repair shops, technical service points and tractor and vehicle garages are in unsuitable buildings without the needed equipment. Last year the construction of such buildings only exceeded demand by one percent. At the beginning of last year grain and seed storage capacity was double requirements, but the introduction plan was overfulfilled 32 fold.

Low feed quality is a reason that in recent years the feed base has not provided for the appropriate improvement in animal productivity. To improve feed quality the agrocommittee has decided to change its structure, increasing the amount of feed roots as the milk producing component, changing technology and increasing the percentage of hay prepared by active ventilation. Of course, implementing this depends upon the presence and condition of storage buildings. At the beginning of last year only 9 percent of the needed root storage

buildings were available, silage and haylage storage units — 76 percent, grass meal storage — 74 percent, hay storage — 9 percent. How can these facilities be built?

Last year the plan for the introduction of hay barns was 100 percent fulfilled. Buildings with capacity totalling 41,700 tons were built. This increased capacity to only 24 percent of requirements. The target for introducing grass meal storage units was only 28 percent met, that for root storage units 39 percent and silage and haylage units — 12 percent. Any comments are unnecessary.

Everybody knows the usefulness of organic fertilizers. However, they are little used, even though animal farms in the oblast literally throw away manure because requirements for manure storage areas are only 2 percent met. Their introduction is not planned. There are not enough storage buildings for mineral fertilizers and poisonous chemicals even though the plan for their introduction was only 46 percent fulfilled.

One can conclude that the marked improvement in indicators last year should not be viewed as a result of radical changes in investment policy.

The oblast agroprom and its managers and specialists should seriously think about the results from the 12 Five-Year Plan's first year in order to make appropriate course changes in the long term development of all agro-industrial complex components and to create the conditions necessary for the conversion to self-financing.

Response to Article

18240044 Moscow *EKONOMICHESKAYA GAZETA* in Russian No 1 Jan 88 p 12

[Article by V. Galanin, deputy chairman, Kemerovo Oblast Agroprom: "Answer to *Ekonomicheskaya Gazeta*"]

[Text] The Kemerovo Oblast Agro-Industrial Committee discussed this article. The shortcomings it cited in the economic activities of the oblast's farms are in fact true. Managers and specialists at farms, RAPOs and the Agrocommittee are working to eliminate them.

As was correctly noted in the article, up until recently there was no effective mechanism holding down agricultural production costs. This is a reason for costs growing faster than production volume.

The situation is now improving. Collective and family contracts and the payment of labor from gross income are more widely used. The share of arable land attached to contract collectives has increased to 78.2 percent. There has been a marked increase in the number of such units in animal husbandry. Thirty one collectives on family contract and 44 intensive labor collectives have been created. Labor payments from gross income are used on 15 kolkhozes and sovkhozes and the check form of cost control is used on 137 farms.

In 1988 it is intended to change capital investment allocations. It is planned to increase social cultural and service project investments 1.25 fold over the 1986 level and food and processing sector investments more than 1.5 fold.

The economic training of cadre is under way for the second year. During the winter period this year 11,000 RAPO and farm managers will undergo training at the oblast school for agrocomplex management and at ray-ons.

There are still many shortcomings in economic work and improvements to be made in farm financial condition. These are not being straightened out as quickly as we want. Therefore the efforts of managers and specialist at all APK units are concentrated on one of the main directions — the introduction of intrafarm accounting.

Farm Managers in Other Areas Respond

18240044 Moscow *PRAVDA* in Russian 15 Jan 88 p 1

[Article by T. Yesilbayev, V. Pankratov and V. Shirokov: "Our Own Ruble"]

[Text] On 1 January kolkhozes, sovkhozes, service and processing enterprises in the agro-industrial complexes of several republics and oblasts converted to full cost accounting and self-financing. How did they prepare for this transition and what is expected from it locally? Our correspondents asked this of management workers in the Estonian SSR, Stavropol Kray and East Kazakhstan Oblast.

A. B. I. Upsi, secretary, Central Committee, Estonian Communist Party: The conversion to higher forms of cost accounting puts farms in difficult conditions. Now they must cover their costs through their own incomes. If they want to earn incomes they should work properly.

We are now more actively using price formation tools. Price supplements are being introduced for low profit types of products. For potatoes the supplement over purchase prices will average 52 rubles per ton, for produce grown on open ground 82, for fruit — 80, and berries — 120 rubles.

It is intended to use agroprom resources with maximum efficiency. If land quality exceeds 35 points, it will be allocated resources from centralized funds. Payments are also being introduced for fixed capital assets and labor. A "get more — pay more" system of payments is also being introduced for the use of state owned concentrated feeds.

I. Taranov, chairman, Stavropol Krayispolkom: We began the transition to full cost accounting and self-financing two years ago. The experiment's results are grounds for

hope. During this period the average annual gross harvest of grain increased by 575,000 tons, meat production by 60,000 tons, milk by 91,000 tons, eggs by 93 million. The plans for these two years were fulfilled for all main indicators.

While in 1985 82 kolkhozes and sovkhozes lost money, last year all earned profits. Prior to the experiment agricultural production costs considerably exceeded the gross output growth rate. Last they declined by 216 million rubles compared to 1985.

I want to note that the kray did not receive an extra kopeck for the experiment in excess of its previous rights. How did we handle the situation? We combined the resources allocated from the budget for major construction, for insurance payments and mark-ups over purchase prices. These were concentrated upon stimulating animal product output.

However, we could not do everything on our own. It required help from the center. Is it really normal for edible vegetable oil to cost almost three fold less than industrial oil? Prices for some types of agricultural equipment remain high.

A. Milkina, first secretary, East Kazakhstan Obkom: I will admit that not all the farms and APK enterprises were ready for the conversion to self-support and self-financing. There are money losing units among them. The oblast agroprom analyzed the financial situation and profitability of each sovkhoz and kolkhoz. We outlined measures to improve the economically weak ones.

At strong farms the cost approach outlived its usefulness long ago. For example, the Nikolskiy Sovkhoz, managed by V. Kalganov, annually receives 1.8-2.5 million rubles in profits and its profit rate is 43 percent. We utilize the experience of sovkhozes and sovkhozes which were previously converted to cost accounting. The number of money losing farms was reduced by two fold. Rural workers in the oblast completed last financial year year with almost 40 million rubles profits.

Now, under perestroyka, work methods and style should be distinguished by extensive democracy. Localities intend to elect the most authoritative farm managers as RAPO council chairmen. The council will be given the right to determine the the RAPO apparatus structure, staff and functions. Also there are provisions set up production associations, radically changing RAPO status, functions and rights.

FORESTRY, TIMBER

Forestry Official Discusses Timber Industry Shortcomings

81442512a Moscow *LESNAYA PROMYSHLENNOST*
in Russian 9 Jan 88 p 2

[Article by V. Antonov, head of the Section for Timber Resources and the Forestry Industry of the Council for the Study of Productive Forces of USSR Gosplan: "What Should the Forest Complex Be Like?"]

[Text] An exceptionally complicated situation in the use of timber resources has truly developed within the country. But it is fully proper and readily explainable. The data on wood supplies that was cited in the article entitled "Fate of Our Forest" (Issue No. 147 of *LESNAYA PROMYSHLENNOST* for 1987) reveals our potential possibilities. And at the same time they once again confirm our inability to handle our own natural resources in an economically intelligent manner.

Our timber resources are adequate. However, the negative phenomena and unresolved problems are accumulating to a greater degree with each passing year. Moreover, the reasons for our falling behind in the production of effective types of final products are much more serious than those pointed out by the chief of administration for forestry and the timber raw material bases of USSR Minlesbumprom [Ministry of Timber, Pulp and Paper and Wood Processing Industry] N. Medvedev and Academician A. Isayev.

First of all, the country lacks a scientifically sound state policy for the utilization of timber resources. Instead of such a policy, we see free enterprise flourishing among dozens of ministries and departments, a type of enterprise that destroys forests almost in an uncontrolled manner. All those who are not lazy are proceeding with this work with axe in hand.

Secondly, the level of domestic forestry machine building is very low and this is restraining growth in the production scales for the chemical and chemical-mechanical processing of wood. And this in turn is preventing us from achieving an elementary level in the all-round processing of wood. In other words, state policy in the development of machine building is not ensuring the thrifty and efficient utilization of timber resources. For example, it is by no means an accident that paper and cardboard-making machines and also imported curing pans predominate in our production operations. In leading capitalist countries which have developed forestry industries, the investments in equipment for this branch increase annually by an average of 20-30 percent. Our indicator in this regard is much lower. In addition, the disproportions in the mechanization of forestry and the timber industry are considerable. Insufficient funds are

being allocated for the reproduction of timber resources on a lumber production industrial basis. Less than 1 ruble annually is being made available per hectare of covered forest.

Thirdly, our backwardness in the use of chemical processes in the forestry complex has become chronic in nature. Thus the absolute increase in cellulose production in the USSR during the 1971-1985 period amounted to 3.3 million tons and in the U.S.A. — 10.7 million tons. Moreover, it should be borne in mind that cellulose production in the U.S.A. reached roughly 45 million tons in 1985 and in the USSR — only 8.4 million tons.

Should Industrial Cuttings in the European Part of the Country Be Increased?

There is no simple answer for this question. The problem of timber consumption in the country's European zone is extremely complicated not only from the standpoint of the economics of the forestry complex. It is associated with a scientifically sound evaluation of the status of the timber resources in various forest groups in this zone and with the development and implementation of progressive technologies for forest cultivation and exploitation, while ensuring protection of the environment and retention of the many purposes of forests.

Yes, truly, if we make a judgement based upon the average annual increase, which exceeds more than 300 million cubic meters, then it can be said that opportunities do exist for increasing the fellings of main or intermediate use in this zone. However, with use being made of such a formal approach for solving such an important problem, the ecological aspects of the environment can be disrupted quite easily. Here it is appropriate to note that at the present time almost one third of the plantings of the principal forest-forming strains in the European zone belong to forests of the 1st group. Nevertheless, we can in no way agree with a concept which negates growth in the volumes of timber procurements in forests of the 1st group. It is believed that a partial solution can be achieved for the problem concerned with increasing the timber procurements in the country's European zone. But this necessarily requires additional capital investments in developing the forest resources. An equal need exists for ensuring that the plans for forest exploitation and for the reproduction of forestry resources are not only carefully balanced but also carried out in an efficient manner. Investments must necessarily be concentrated in regions where they will produce the greatest economic results.

It is important to bear in mind that an expansion in the scales of timber procurements in the European zone of the country will require an increase in expenditures for developing a network of highways and railroads for general use. This increase in expenditures will be influenced to a considerable degree by the fact that the forestry raw material base in this zone, where two thirds

of all wood is procured, is exhausted and many enterprises have been forced to discontinue operations. Thus a great amount of effort will be required in the future in order to maintain the existing production capabilities for shipping wood in conformity with the modern level.

Under Today's Conditions, What Can Be Expected From a Scientific Approach for the Problems of the Forestry Complex?

First of all — the integration of forestry husbandry and lumber industry activities into a single system based upon the three principles of completeness.

The first of these — completeness in the territorial organization of forestry husbandry and the timber, pulp and paper and wood working industry at the level of an enterprise, rayon, oblast, kray or union republic.

The second — completeness in the utilization of timber raw material resources and maximum consumption of wood waste products.

The third — completeness in territorial-branch planning for and the administration of specialized branches and production operations for the country as a whole.

Under conditions concerned with the carrying out of a radical economic reform, a great amount of attention must be devoted to improving scientific validity and, I emphasize once again, to achieving balance in the plans for the development of forestry husbandry and the lumber industry. The functions of all of the constituent elements of the forestry complex must be defined more precisely and improvements must be realized in the system of plan indicators and the methods for validating them, that is, a radical improvement must be achieved in the operation of the economic mechanism.

And Finally, the Idea Concerning a Single Master in the Forest

I believe that this idea must necessarily be embodied in the practice of socialist management. It reflects the objective regularities of all-round economic and social development for all mutually related branches of the forestry complex. Classic forestry management has always been based upon unity in timber fellings and forest cultivation. From an organizational, technological and economic standpoint, it is a single mutually related system of branches which operates on the basis of the dominating role being played by forestry husbandry. A strong interrelationship exists between forestry husbandry and the timber industry. And any arbitrary attempt aimed at separating them can result in serious and at times grave consequences and miscalculations.

The creation of a single organ (master of the forest) for planning and administration in the various areas and in the center is of exceptional importance. Unfortunately, USSR Gosleskhoz and USSR Minlesbumprom have turned out to be indifferent masters. They clearly are not

copied with the task of forest reproduction or efficient utilization of wood raw materials. They are not implementing any complete or scientifically sound concept for the efficient and economic use of a forest, since they lack such a concept. Insurmountable departmental barriers exist between them and these are requiring tremendous expenditures of energy and time. And this internecine dissension is largely responsible for the fact that up until now there have been no effective limitations which would serve to prevent a reduction in the country's timber potential, especially from the standpoint of quality. However, it should be noted that we possess many different types of official normative documents and instructions.

Thus a single forestry complex requires a single master. But it would be wrong to form such a complex based upon the principle for an agro-industrial complex. The

field of forestry is an exceptionally complicated field of human activity in which a unified complex of biological, forestry, engineering-technical and technological sciences and knowledge is manifested. A forest cannot be viewed as field crop husbandry with an annual cycle for the cultivation of agricultural crops. Here dozens of years and the labor of more than one generation are needed in order to realize the final results. Other laws are at work in a forest, the ignoring of which at the present time have resulted in a lack of control over and mismanagement in the utilization of the forest resources. It is obviously impossible to report in detail what the situation will be like with a single master. But it can definitely be stated that the chief element of a single forestry complex must be a forestry economy that is inseparably aligned with timber industry operation.

7026

ENERGY COMPLEX ORGANIZATION

Current Cleanup Operations at Prip'yat, Chernobyl Described

18200058a Kishinev SOVETSKAYA MOLDAVIYA in Russian 17 Jan 88 p 3

[Article by ATEM correspondent V. Demidetskiy, under rubric "Report from Chernobyl: 'People and the Atom'"]

[Text] We had just barely left rayon center Ivankov, the last populated point before reaching the 30-kilometer zone, when changes became noticeable. Our vehicle, bypassing the checkpoint, was rushing along unharvested fields that were overgrown with weeds, as we headed for the camp that was situated near a forest.

"Welcome!", its "boss," A. Dubakov said with a smile as he met us. "How about having a bath to relax after your trip, and having a bite to eat? Then we can get to work!"

It was not without pride that he showed us the spotlessly clean medical center, the study and recreational rooms, the dining hall, the club, and the personal-services center.

Especially Critical Zone

Kishinev-Chernobyl-Prip'yat-Kishinev. Early in the morning we start out. On the windshield of the minibus is a special pass that authorizes entry into the zone the center of which is the AES [nuclear power plant]. The policeman and the dosimeter specialist on duty inspect the inside of the minibus and raise the barrier.

On the broad but unusually deserted itinerary, one's attention is involuntarily drawn by a strange road sign — a "brick" with the warning under it: "Keep off the shoulder."

"This is to prevent the vehicles from raising the dust that continues to be radioactive," Dubakov says, turning around and facing us. "Last year this road was the main one. Columns of cement-mixer trucks traveled along it."

I had read many times about the villages that had been deserted in Chernobyl'skiy Rayon. But when we drove into the very first one that we met en route, I must admit that I felt somewhat strange. All around us were orphaned homes with the dead eye sockets of hurriedly boarded-up windows, and we could hear gates swinging in the wind on their uncoiled hinges. The vegetable gardens were a kingdom of weeds and unmown grasses, and in the neglected orchards apples were rotting on the branches.

As we drove out of the village we came to another KP [checkpoint]. Beyond it was situated the medical processing station [PUSO]. This is where the equipment

that has been operating in the zone is cleaned of radioactive dirt. Standing on a scaffold, enshrouded in puffs of steam, is a powerful concrete pump mounted on a truck chassis. Its 70-meter "trunk" was used during the construction of the sarcophagus to feed liquid concrete onto the roof of the damaged energy unit. Two persons in respirators and rubberized coveralls are pouring onto its sides from their nozzles heavy streams of hot water that is mixed with detergents. Then the vehicle is checked by the dosimeter. The indicator arrow stubbornly crawls upward.

"Well, I guess it will need more than one 'bath.' Too much dirt has been accumulated," Georgiy Ursu explains. He and his partner Valeriy Grigorash have come here from Moldavia.

"How's the work coming along?", I ask my fellow-Moldavians.

"Normally. True, at first we felt a bit uneasy. And, judging from the letters we got from home, we felt that people there were worried also. But, as it turned out, people can work here. The only thing is that you have to adhere strictly to the elementary work-safety rules."

"Do you work a lot?"

"Several hours a day. Unlike the summer, the flow of trucks has reduced now. For the most part, we wash off the equipment that has been operating in the zone that now is at the sedimentation area."

Not far from the PUSO we saw that sedimentation area. On a fenced-off sector alongside of the road were long lines of trucks, cranes, and jeeps. The compartments of many of them were lined with lead slabs.

After passing yet another KP, we found ourselves in the zone encompassing the city of Prip'yat and the area of the nuclear power plant itself.

"This is the 'red forest,'" Dubakov said, motioning with his head. Beyond the strip of dirt that has been plowed up along the shoulder are pine trees that are so red that they look sunburned. These are the trees which, on that tragic night, had taken on part of the radioactive discharge. Now powerful bulldozers are rooting out the dead tree and dragging them to their burial grounds.

Only one pine tree has avoided that sad fate. It is the one whose dried-out branches reach out like hands to cover the partisan graves that are situated at its base. The rusty clamps in its branches are the traces of fascist gallows, the local residents assert. It was here during that terrible time that our enemies executed the true sons of the Homeland. In memory of them, there are wreaths on modest pyramids with a five-pointed star. They had been brought here by those who, more than 40 years later, in the fight against an invisible death, had not shamed the memory of their fathers and grandfathers.

At the Power Plant

In the open spaces among the trees, the chimneys and buildings of the nuclear power plant stick out.

Ordinary life is in progress at the power plant. Walking alongside the unit are people with buttoned-up jackets worn on top of their white coveralls. We approach one of the groups. Here too we find fellow-Moldavians — Stepan Sopka and Nikolay Balan.

"We're laying concrete near the machine room," Stepan tells us. "It's a strenuous work schedule. On the one hand we are constrained by the continuously arriving concrete, and, on the other hand, by the dosimetry specialists who do not allow us to stay here more than the established time."

"Despite the fact that the radiation level is no longer so high, the situation is being strictly monitored," Nikolay says, entering the discussion. "We wear respirators when we work."

Each person wears in a pocket on his chest an individual instrument that keeps track of what radiation dosage its owner has received. This data is constantly monitored on special instruments at the medical center.

"What if the dosage reaches the maximum admissible dosage?"

"We send them home immediately!," Dubakov states categorically. "We're very strict about that. Just yesterday, a specialist from Tiraspol arrived at the same time you did. He had already been working here last autumn and now he asked to be allowed to come back again. But our medics, despite his persistent pleas to let him stay, sent him back today."

Ul. Druzhby narodov

Ul. Kurchatova, Ul. Lesi Ukrainki, Ul. Druzhby narodov are the names of the unusually deserted streets of Pripat that flash by as we drive along. It is as though the city is sleeping, but morning will come and the cars will wake up on the streets, a flood of people will come pouring out of the buildings to the bus stops, and the melodious voices of children will fill the playgrounds. But it will be a long time before a morning like that occurs here. For the time being, on the streets of Pripat one can see only powerful dump trucks hauling to the burial grounds the articles that have become dangerous for people's health.

Some of the buildings have already been cleaned of radioactive dirt. Those buildings house the specialists who are working in the city and at the power plant. The background here is the same as it is, for example, at any large industrial center.

"The work we do is unusual and it requires high organizational spirit and precision, and must be well thought-out," Hero of Socialist Labor Yu. Samoylenko said during a conversation with Moldavian journalists. "While I'm working, I hear all kinds of languages — Ukrainian and Latvian, Georgian and Moldavian. The well-knit collective that is working here now is a sight to behold. Everyone works with an awareness of his own responsibility to the people who suffered from the accident."

There is still a very large amount of work that has to be done. And in what has already been done and is now being done one can see the considerable contribution that has been made by people who have come here from many fraternal republics, including Moldavia.

5075

ELECTRIC POWER GENERATION

Baltic GRES Reconstruction Announced
18220052 Tallinn SOVETSKAYA ESTONIYA in
Russian 30 Jan 88 p 3

[Interview with Deputy USSR Ministry of Power and Electrification Yuriy Ivanovich Kirillov with K. Politsinski of the newspaper RAKHVA KHYAEL (translated by T. Burlakova): "What Will Happen to the Pribaltiyskaya GRES?"]

[Text] In connection with the forthcoming rebuilding of the Pribaltiyskaya GRES, Deputy USSR Ministry of Power and Electrification Yuriy Ivanovich Kirillov visited Narva, Kokhtla-Yarve and Tallinn on 25 and 26 January. Before his departure for Moscow he gave an interview to a correspondent of the newspaper RAKHVA KHYAEL.

[Question] What occasioned the large-scale rebuilding of the station?

[Answer] The station has been operating now for more than two decades. Part of the equipment is worn and has exhausted its potential. The purpose of the rebuilding is to update the pool of equipment and thereby to increase its reliability. Only in this way is it possible to guarantee a stable power supply.

The main task is to replace the aging turbine units. The 100-megawatt units installed here for the first time will be replaced by 200-megawatt units, which have proved themselves on more recent lines of the Pribaltiyskaya GRES and at the Estonskaya GRES.

The new power units will be substituted in accordance with modern requirements for technology and the ecology. The station's capacity will grow by about one-eighth.

[Question] What is the sequence of the work?

[Answer] The previous station will still operate. Simultaneously, installation of the new units will start. As they become ready, we shall stop the units of the first line.

[Question] The new units have been produced in accordance with the latest word in technology?

[Answer] They take into account all the experience gained during the operation of shale-fired electric-power stations in Estonia—actually there is no place to gain experience that is more similar. The boilers and the ash-separation and ash-catching installations are being improved. It stands to reason that the degree of automation is higher, so that the new equipment may be more economical and make the labor of the power workers more productive.

[Question] Does the rebuilding require the involvement of an additional work force or are you counting only on the work force that is already there?

uction and installing work at the station itself is about 200 million rubles. Measures for improving the water and heat supply and for building ash-removing and additional structures will cost another 250 million.

This means that up to the year 2000 we should do 45 to 50 million rubles worth of construction work annually at Narva. The current capacity of the construction administration of the Estonian GRES is 10-12 million rubles per year. Thus the recruiting of construction workers and specialists is inevitable. The servicing personnel of the plant itself is not being increased.

[Question] But have you not thought about the decree of the Estonian Communist Party and the Estonian SSR Council of Ministers, which gives the right to require from enterprises in cities of republic subordination the payment of 10,000 to 15,000 rubles in compensation for each worker brought in from outside the republic?

[Answer] These sums have been foreseen in the "social" part of our project. We shall construct also all the necessary elements of the social infrastructure: housing, dormitories and service enterprises. If the compensation is paid out, the appropriations for the social infrastructure will, in essence, be doubled, and this will inflict economic harm on the power workers. Or the republic will look at the matter differently.

[Question] Who will train the additional work force, where and how?

[Answer] Our trust, Sevensergo [Trust for the Construction of Power-Engineering Facilities in the Northern Regions], is one of the oldest in the country that specializes in the construction of power facilities. The trust works well. There are, of course, deficiencies. However, it still has a potential for raising worker qualifications

and the quality of construction and also for creating standard facilities. Rebuilding of the Pribaltiyskaya GRES will proceed according to this system.

[Question] How will the ecological problems be solved?

[Answer] During the rebuilding, engineering solutions will be used that will help to improve the existing ecological situation. The new engineering parameters of the boilers, ash-removing and ash-trapping equipment, and water-recycling systems will enable, despite the station's increased capacity, the amount of harmful emissions into the atmosphere to be reduced and pollution of the water to be practically stopped.

Specialists who have become acquainted with our operations have concurred with the proposed solutions. In the near future we shall conduct a discussion of the design in Estonia, in order to explain to the populace those new features we have considered and used. It is completely clear that the ecological situation will not be degraded. One cannot forget that all this is needed for a stable power supply.

[Question] And still it has not been possible until now to avoid pollution of the air or to reduce it to any great extent.

[Answer] Ecological problems are on the agenda today at all levels. The appropriate sums are being increased and in some cases even doubled. Today, during development of the designs, these points of view and the requirements that previously were not adopted in the analysis are being considered. This means that not one design will proceed without the concurrence of nature-conservations organizations. We also are trying to treat matters the same way.

Our ministry works in that area in order that, independently and also in collaboration with our partners, for example, in machinebuilding, new equipment and new technologies which will meet the modern, stricter requirements will be created and used.

[Question] Have Estonian SSR scientists been involved in discussion of the design?

[Answer] We have done so repeatedly. We shall do it also henceforth. I consider that there should be more glasnost on this question, which would permit both the scientists of Estonia and the residents of the republic to understand better the strivings of the power workers and the problems solved by them.

[Question] Have additional measures for protecting the atmosphere been called for? Indeed, the problem is not only with fly ash but also with toxic gases.

[Answer] The filters catch 99.8 percent of the ash. Precise work by personnel in selecting and maintaining a combustion mode that would enable atmospheric pollution to be avoided is important.

We have not installed gas-trapping installations anywhere today. There simply are none, and the developments are very expensive, so we shall have to suffer with this for the near future.

[Question] Power stations can operate in a steady, so-called base mode, or at a peak load, in a peak mode. Which of these will predominate at the Pribaltiyskaya GRES?

[Answer] Today the station is operating for the most part in a maximum load pattern and it can work this way for the next decade. More broadly, the ministry is solving problems of saving fuel, striving to set it that all power stations work in an optimum mode. It is this that we are wracking our brains about here.

11409

Berezovskaya GRES-1 Construction Report
18220054 Moscow PRAVDA in Russian 26 Dec 87 p 1

Article by V. Komorin and N. Krivomazov (Chernenko, Krasnoyarskiy Kray): "The 'Last' Deadline—KATEK: Report and Fact"]

[Text] This event was planned for the year 1985. Then a "last" deadline for startup of the Berezovskaya GRES-1 was named—August of this year. And all over again it was unsuccessful, for which the manager of Krasnoyarskenergo [Krasnoyarsk Regional Administration of Power System Management] V. Kuznetsov took from the organization's cash box 7 million rubles for a penalty....We ask him if there is any sense now, at the end of the year, in taking a business trip to KATEK [Kansk-Achinsk Fuel and Power Complex] in order to see the firstling of the Kansk-Achinsk Fuel and Power Complex in operation—startup of the first 800,000 kW power unit.

"It is a complicated facility," the power worker noted cautiously. "It is our dream to give it a comprehensive test this year, based on the designed fuel, that is, local coal."

"And as soon as the turbine operates the mandated 72 hours, the state commission will certify this event with their signatures?"

"Naturally," was the answer.

"After which the power unit will go into state reporting?"

There was a pause....It was caused by the fact that there will be no state commission this year. There will be a working commission. It would seem that there is little in

a name. Indeed a working commission should judge the readiness of the facility strictly and in accordance with the state's rules. But after the signing, it begins to be incomprehensible. The facility actually will go into reporting but...it will not go into operation, the state plan will not be applied to it for a fairly long time. Then for what reason is a report rendered about an extremely "truncated" startup?

"In my opinion, everything is explained simply," reported chief of the capital construction section of the GRES's directorate, M. Arbatskiy. "If the working commission does not accept it before 1 January, then Glavvostokenergo [Main Administration for Electric-Power Engineering in the Eastern Regions] and all of its staff and its collectives will not receive 7.5 million rubles in bonuses for introduction of the capacity."

At this point of the conversation one can once again recall that those 7 million rubles in penalties in August came from the state's pocket. And the forthcoming 7-million bonus will be dispersed among personal pockets. Both those who actually worked "like the devil" and those who failed all the deadlines and now would give out semifinished goods for the finished product will get it.

At the start of December a plenum of the Chernenko city party committee was held which again recognized that the formation of KATEK is going askew. The callous illness of bureaucratism is well known. USSR Minenergo has become at once the client and the developer. But indeed its main official task is to introduce capacity. The forming of a city remains a makeweight to the new electric-power stations.

As chairman of the city ispolkom I. Rudakov says, at KATEK there are not enough schools, housing, hospitals....And as for the cinema, it is easier to go to a star in the sky than to buy a ticket. The construction of vegetable storages began simultaneously with the electric-power stations. But it, as we see, is being readied with an all-out effort for startup, while in the unfinished storages, meanwhile, produce is rotting. Here also a complete break in the construction of housing and social and cultural facilities occurred this year.

And here is still another menacing figure: unfinished construction here has exceeded half a billion rubles....Nevertheless, during construction of the GRES, they are hurrying the "reportable" facility, they are getting ready for the storm. In one of the better construction brigades, that of V. Chepikov, party organization secretary T. Pabovskaya, considers that they are not ready for startup here:

"We finish something here for someone, and we redo it.... And then the white-collar workers of all the 'offices' are brought in for crash work. Then they wander about the buildings, without knowing what is going on—hundreds of people."

Tens of high-capacity dump trucks are being readied for the startup. They, instead of the multikilometer coal transporter, will bring coal. In the specialists' opinion, several more months will be required to bring the transporters to completion. To bring fuel in by truck is extremely expensive and not technologically feasible. "And in my opinion, they had might as well bring it in in airplanes," one of the power workers exclaimed at this report. The engineering laboratory building is not entirely in a startup state (Does it guarantee reliable monitoring of the power unit's operating parameters?), and the repair base has been removed from the early-startup scheme. These are those "truncations."

But we repeat, the last word about readiness for startup remains with the acceptance commission. It includes experienced people who have become skilled in the matter, who know precisely what is proposed both for startup and...for deception of the state. In the final analysis, if the GRES's director considers that the power station is ready for operation, let him sign a certificate—he will operate it and he will answer for it.

Throughout the whole country today, numerous acceptance commissions are sitting at the negotiating table. It is done for quite a bit of the year. Everything ready for operation must be accepted and quickly put into operation. But giving uncompleted construction as finished output is no good at all. This means responsibility should be high for signing, a strict accounting. For the price of this "autograph" on a state document means not only millions of rubles but also the attitude of the people who will come to the facilities with faith in the potential and the necessity for changes. In brief, the country needs actual, not publicity, startups. And not just at KATEK.

11409

Takhiatash GRES Unit 5 on Line

18220056a Tashkent PRAVDA VOSTOKA in Russian
1 Jan 88 p 2

[Article by I. Nigay: "Startup: the 5th Power Unit of the Takhiatashskaya GRES Goes on Line"]

[Excerpts] Three days ago the startup unit took on, as the power workers say, a minimum load. And for all these 72 hours, there was output according to specifications on the first test, here, at the control panel of the GRES's fifth line, where there still is no placard with the strict warning, "Entrance of outsiders prohibited!" on the double glass doors, and there was babel.

On 30 December, at 1000 hours, the power unit produced commercial current. The power was 210,000 kW. And stationwide it reached 520,000 kW. The Karakalpak "star" on the republic's power-engineering map obtained, finally, the fifth point—light itself.

11409

Turukhanskaya GES Construction Condemned 18220056b Moscow SOVETSKAYA KULTURA in Russian 31 Dec 87 p 6

[Article by Yevgeniy Gontmakher, candidate of economic sciences (Moscow): "Along the Old Road"]

[Text] I was at the Krasnoyarskaya GES several years ago. In trying to stimulate the imagination of sightseers with the scale of that structure, the guide said, "The concrete laid in the dam's embankment would be enough to build a highway from Krasnoyarsk to Moscow." And I suddenly thought: can it be that it would really be better to build the road? For nature it would be more useful, and for people more needed. The newspaper SOVETSKAYA KULTURA—the reader senses this—is seriously concerned about both ecological and social problems. It would be very useful if it had been actively included in the discussion of projects of such scale and expense at the early stages, when it was still possible to avoid mistakes. And such a danger exists. In spite of everything, the start of construction of the Turukhanskaya GES, not far from the mouth of the Lower Tunguska, is planned. The 20-million kW station will be the largest in the world.

It is proposed to block the river with an enormous earthen dam 200-210 meters high, or a concrete one 180 meters high. The reservoir, 1,200-1,400 kilometers long with a maximum width of 15 kilometers and a depth down to 190 meters, will flood about 850,000 hectares of taiga. These are the primary data.

"For" the Turukhanskaya GES is Minenergo [Ministry of Power and Electrification] and its Leningradskiy Institut (Leningrad Institute for the Design of Hydraulic-Engineering Projects), author of the feasibility study (TEO) for construction of the station. "Against" are the ecology, economists, and scientists of a number of other specialties.

First we shall cite the arguments "for." Their chief ones are: first, the low cost of the electricity and, second, the necessity for using the builders' collective that soon will turn over the Kureyskaya GES for operation.

And now the counterarguments. As for the cheapness of the electricity, the calculations did not consider the cost of transmitting it over superlong distances and, the main thing, they completely ignored expenditures on nature-conservation and ecological measures. For example, the removal of trees from the bottom of the immense future reservoir alone will require 2 billion rubles.

And the possibility of using the existing collective of builders of the Kureyskaya GES? That station has less than one-thirtieth the capacity of the Turukhanskaya GES. Accordingly, even those 4,000 builders who, it is proposed, will be rushed to the mouth of the Lower

Tunguska, will in no way meet the workforce requirement of the new gigantic construction project. The designers themselves propose to employ 20,000 people here.

But let's take the broader look. The ecology. The creation of a vast sea will exert an influence on the natural environment and climate of almost the whole north of Krasnoyarskiy Kray that is unforeseeable right now. There has been practically no research on this topic yet.

Minenergo is using as a last trump card still another argument "for" the necessity for building up in every possible way the country's electric power. In the light of Chernobyl and the technical and ecological difficulties of using Kansk-Achinsk and Ekibastuz coals, one can conceive of a rush again to accelerate the use of hydropower resources. But here also an extraordinarily well-considered approach is needed, which Minenergo clearly has not covered. Examples? The untenable, unfortunately, Nizhne-Obiskaya GES, the attempt to create the Daugavpilskaia GES, which was turned down by the people and then also by the Government of the Latvian SSR, the struggle that developed around hydroconstruction on the Katun, the hotly contested decision to erect the Sredne-Yeniseyskaya GES, and so on.

This is the place, evidently, to recall that we have spent 12 percent more per unit of productive national income on electric power than has the U.S. This indicates that the task is not so much a buildup in the generation of electricity at any price as rational use of it and the introduction of energy-saving technology.

11409

Talimardzhanskaya GRES Construction Report
18220056b Tashkent PRAVDA VOSTOKA in Russian
14 Jan 88 p 1

[Article: "A GRES Is Rising up on the Karshi Steppe—At Construction Projects of the Five-Year Plan That Are Due for Early Startup"]

[Text] The first cubic meter of concrete has been placed for the footing of the Talimardzhanskaya GRES power unit. Builders of the general contracting trust, Uzbekgidroenergostroy [Trust for the Construction of Hydroengineering Facilities in Uzbekistan], have undertaken the main operations on a five-year plan facility that is due for early startup. During the remaining three years they are to assimilate tens of millions of rubles of capital investment and put a unique 800,000-kW power unit on line.

Before the concreters went to work, the excavators and bulldozer and scraper operators toiled here stoutly. They moved more than 700,000 cubic meters of heavy soil and did ground-leveling work. Instead of the traditional excavated "nests" 3-5 meters deep, the builders made

14-meter foundation pits. The massive footings guarantee reliable protection from underground tremors for the station's components and assemblies.

The standard term for erecting a power unit is 53 months. In order that the first 800,000-kW unit may begin to generate power in 1990, the builders are required to increase labor productivity severalfold and to obtain metal constructional structure and boiler and turbine parts without interruption and precisely on schedule. Is this realistic?

"We have not built such a complicated facility before," says I. Shigilchev, deputy manager of Uzbekgidroenergostroy Trust. "The thermal electric-power station is being erected in a zone of high seismicity. Because of this its constructional features are special. And then, all these years we have not been supported with enough funds and equipment. So right now technical and economic measures for accelerated introduction of power unit No 1 are being developed at a forced pace."

Great hopes are being pinned here on the law on state enterprises that is coming into force. It should put an end to bureaucratism and place a reliable barrier against violators of contractual deliveries.

Uzbekgidroenergostroy subunits are to assimilate 25 million rubles this year. For successful execution of the work planned, it is necessary primarily to resolve the question about reliable support of the brigades and sections with building materials, especially concrete.

The construction project on the Karshi Steppe is gaining strength.

11409

Pribaltiyskaya GRES Reconstruction Reported
18220056d Tallinn SOVetskaya Estoniya in Russian? Jan 88p

[Article by A. Yevgenyev (Narva): "On the Threshold of Rebuilding"]

[Text] The Pribaltiyskaya GRES was loaded to only half of its capacity the first three days of January: most of the industrial enterprises, the main power customers these days, did not operate. But on the fourth of January, the meters of the instruments on the station's main control panel were again working as usual for weekdays and began to indicate a maximum load. The power units worked at a strenuous pace. But today the firstling of shale-fired power engineering did not so easily sustain the prescribed rhythm. In 28 years of operations the equipment, which was just about worn out, had worked off its service life. Many complaints had been made by nature-conservation organs because of the poor effectiveness of the station's scrubbing equipment. In brief, the time had come when rebuilding was necessary.

"USSR Minenergo adopted the decision to build still another, a fifth, line for the Pribaltiyskaya GRES and, accordingly, part of the worn equipment will be taken out of operation," says Deputy Director for Capital Construction Eduard Ryzhakov. "Without reducing its operating capacity, the station will be updated. It is planned to introduce the first power units of the line into operation in 1990, the rest during the 13th Five-Year Plan."

The master designer, the Riga Division of Teploelektroproyekt [All-Union State Design Institute for the Design of Electrical Equipment for Thermal-Engineering Structures], has proposed to install at the fifth line turbines and boilers of greater operating capacity, which are also, at the same time, more reliable and economical than those now operating. Modernization of the electric-power station will provide for an almost 20-percent growth of capacity.

"Problems of protecting the environment were considered along with purely economic problems," said Vadim Iserlis, chief of the Production-Equipment Section of the Pribaltiyskaya GRES, about peculiarities of the design. "In particular, in order to increase effectiveness of the ash removers, it is planned to improve the electrical filters of the existing boilers. The power units of the fifth line also will be equipped with modernized electrical filters. These and other measures will enable pollution of the air basin in the vicinity of Narva to be reduced and discharges of unpurified effluent into water bodies to be prevented."

The amount of the funds allocated to nature-conservation measures that are called for by the design—40 million rubles—testifies to the great importance of nature conversion. In all, the general contractor—the collective of the Estonian GRES's SU [Construction Administration] is to assimilate at these facilities about 300 million in capital investment. In so doing, the social sphere will not be forgotten. It is proposed that 37 million rubles be allocated to the construction of housing and social and domestic-services facilities of Narva.

11409

Armglavenergo Head Interviewed

18220056e Yerevan KOMMUNIST in Russian
22 Dec 87 p 1

[Interview with Feliks Khachaturovich Akopdzhanyan, chief of Armglavenergo, by I. Karapetyan: "The Kilowatts Are Working"]

[Text] The light and heat in our housing, the hum of electric motors in shops, LEP [electric power line] supports that step off far into the mountains—these concepts are closely associated with the power workers' vocation. Perestroyka, which embraces all aspects of the country's social and economic life, has forced another look to be taken at the activity and problems that face

the power workers today—the builders and the operators. Armglavenergo [Armenian SSR Main Regional Administration for Power System Management] chief F. Akopdzhanyan, told in a conversation with I. Karapetyan, correspondent of the newspaper KOMMUNIST, how these problems were solved in light of the new demands.

[Question] Feliks Khachaturovich, the first question, naturally, is, what successes have you brought to your holiday for your system's workers?

a light heart. The multithousand collective of power workers observed the 70th Anniversary of the Great October by overfulfilling the plan for the first two years of the 12th Five-Year Plan. By the end of this year, all the system's enterprises will have produced more than 10.450 billion kWh of electricity, 350 million more than planned. The profit obtained by today was 46 million rubles. The capacity's utilization effectiveness—and this is our basic fund-forming indicator—was overfulfilled by 5.1 percent. Thanks to organizational and technical measures, we were able for the first time in recent years to stay within the established limits for power losses in the power grids.

[Question] It is so well known that the builders' business is not going so well. What caused it?

[Answer] The fact must be recognized that the construction and erection of power units are big matters for us. Because of our own errors and deficiencies, the plan has been disrupted. This year four mazut tanks with a total capacity of 40,000 cubic meters, as well as large power-grid facilities—the Nor Amberd-Aragats, Lichk-Kadzharan LEP, a new urban covered substation, and so on—have been introduced into operation. But we could not turn the Spandaryanskaya GES of the Vorotan cascade over on time because of untimely allocation of earth-moving equipment for handling fill for the dam. The station will be started up in the first half of 1988.

Chernobyl'skaya AES has served as a serious lesson for everyone, and it has raised the requirements for providing for reliability in the operation of power units. What have we done in this area, what kind of problems generally face the republic's power workers today?

[Answer] After the Armyanskaya AES was rebuilt and the long-distance backup for auxiliary power improved, the station's reliability and safety of operation were raised.

The attention of the system's workers is aimed at reducing and completely eliminating accidents and outages in the power grids, providing for unconditional fulfillment of capital construction plans, and, taking into account the corrosive state of the pipelines of the central heat-supply, increasing their annual replacement 1.5-fold. The main thing is, in accordance with decisions for protecting the atmosphere of Yerevan, it was possible to

increase the share of natural gas in the fuel complex and also to complete jointly with the industry's institutes the development of schemes for reducing nitrous oxides in stack gases.

[Question] Power surpluses enable Armglavenergo enterprises to "pump" about 2 billion kWh into the OES [Interconnected Power System] of the Transcaucasus. But the situation can be changed, if an anticipatory pace of power-engineering development is not provided for, because the republic is calling for a substantial increase in industrial capacity. In this connection, tell me, please, about the prospects for developing Armenia's power engineering.

[Answer] Its program calls for an expansion of the Razdanskaya GRES with four 300-MW power units, with the first to start up in 1990. According to the scheme for Yerevan's power supply during the next five-year plan, it is planned to erect a new gas-fired TETs with a capacity of 600-700 MW. In order to reinforce the Transcaucasian OES and the YeES SSSR [USSR Unified Power-Engineering System], high-voltage transmission lines and a 500-kV substation are being designed and will be built. As for "small-scale power," I will note only that there is a scheme developed by Armgidroproyekt [Armenian Design Institute for the Design of Hydropower Facilities] for the erection of about 40 small GES's with a total capacity of 110 MW.

11409

Kureyskaya GES to Go on Line

18220056 Moscow IZVESTIYA in Russian 26 Dec 87
p 1

[Article by A. Shcherbakov (Krasnoyarskiy Kray): "GES Goes into Operation...at Idling Speed"]

[Text] A telegram: The first hydropower unit of the Kureyskaya GES, which was erected amid the permafrost of the Yenisey Arctic, has been started up at idling speed and in a couple of days will be turned over for operation. Its capacity is 120 megawatts. Construction of the station is in a certain sense experimental: the collective of Kureysgstroy [Trust for Construction of the Kureyskaya GES], which has for the first time taken on the role of both client and contractor, has managed to achieve a substantial acceleration of the pace of operations and is confident of turning it over turnkey style by the start of the next five-year plan.

With the entry of the latest, the fifth, unit into operation, this GE, with a total capacity of 600 MW, exceeds that of its predecessor—the Ust-Khantayskaya Hydropower Station—by more than a third. It will not only increase the reliability of the power supply of the Norilsk Mining and Metallurgical Combine but will satisfy to no small degree the rising requirements for power of the port city of Igarka.

A small detail must be added to the victorious report of turnover of the first power unit: the "hero of the occasion" operates only 5-7 days. Pro forma. And then it slams shut. It is silent for a long time, until there is a new high water, which will come to the Arctic only in the middle of the next summer. The fact is that the hydropower builders, for all their valor, "let an opportunity slip by," missed the chance during the current flooding, and were not able to fill the reservoir to the necessary mark. The first thing simply does not work on nothing. But even with a full reserve of water, connecting it to the power system would be problematical. The power lines are not ready. Above all, the main thing: the Kureyskaya GES-Norilak line is on 220 kV. The keeper of the critical-path scheduling, Krasnoyarskenergo [Krasnoyarsk Main Administration for Regional Power System Management], T. Fefelov, told me that, of the 1,679 supports, only 182 were installed, as were about half of the footings, and only 60 kilometers of wire out of 500 have been stretched out. Nor is the substation at Norilak ready; earthmoving work has just started. It is asked: does the customer need Kureyka energy? It is said that it can get along without it for the time being. However, we shall not forget that the northerners' thermal power stations today, figuratively speaking, "are stoked with banknotes,"—they burn gas, mazut and coal. The inexpensive 120 megawatts would not cause a stir for them.

11409

UDC 621.643/553.002.2

PIPELINE CONSTRUCTION, OPERATION

Pipeline Construction Plans Announced

18220053 Moscow STROITELSTVO
TRUBOPROVODOV in Russian No 1, Jan 88 pp 1-4

[Article by A. M. Krayzelman, Chief of the GlavPRU [Main Production-Management Administration] of Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises]: "The Most Important Construction Projects of the Third Year of the Five-Year Plan"]

[Text] The year 1988 is a year of practical realization of the party's economic strategy and of execution of the radical restructuring of control of the national economy that were defined by decisions of the 27th CPSU Congress and the January and July 1987 CPSU Central Committee Plenums.

Implementation of the State Plan for the Economic and Social Development of the USSR, which the USSR Supreme Soviets' Eighth Session of the 11th Convocation adopted, has started, and the Law on the State Enterprise (or Association) has gone into effect.

The ministry's plan for 1988 was formulated on the basis of these most important documents and the proposals of the branch's main regional administrations, production associations and organizations, and enterprises.

This year's tasks have their distinctive features. For the first time, operations worth more than 8 billion rubles are to be conquered, exceeding by 11.5 percent the 1987 level and the five-year plan's goals.

The work volume on building up the facilities of the Yamburg gas-condensate field and the Astrakhan, Karachaganak and Tengiz fields in the Caspian lowland will increase. Acceleration of the erection of oilfield facilities in West Siberia, gas refineries, systems for the gathering and transporting of casing-head petroleum gas, machinebuilding facilities, and agroindustrial and wood-chemicals complexes continues.

The social program calls for the construction of 2.5 million square meters of total housing space, general-education schools for 26,700 pupils, preschool institutions for 23,700 children, and a number of other facilities of the social sphere.

Organizations and enterprises have undertaken to fulfill the state order, in accordance with which 152 facilities, of which almost half (71 of them) are trunk gas, oil and product pipelines, are to be built and turned over in 1988. This comprises about 70 percent of all contracting operations.

The main pipeline construction administrations must put into operation 9,536 kilometers of trunk pipelines, 8,210 kilometers of which will be gas pipelines for USSR Mingazprom [Ministry of Gas Industry].

Glavtruboprovodstroy [Main Administration for Pipeline Construction, Glavsibtruboprovodstroy [Main Administration for Pipeline Construction in Siberia], Glavvostoktruboprovodstroy [Main Administration for Pipeline Construction in the Eastern Regions], Glavinterneftegazstroy [Main Administration for the Construction of International Oil and Gas Facilities], Glavyuzhtruboprovodstroy [Main Administration for Pipeline Construction in the Southern Regions], Glavukrneftegazstroy [Main Administration for the Construction of Oil and Gas Industry Enterprises in the Ukraine] and Glavsredazneftegazstroy [Main Administration for the Construction of Oil and Gas Industry Enterprises in Central Asia] must pay special attention to the construction of gas pipelines in the power-engineering corridor and, in accordance with established tasks, complete the laying of the Yamburg-Tula-I gas pipelines in the first quarter of 1988 and the Yamburg-Tula-II lines before the end of the year, and provide for the gradual introduction of the segments that are built. Before the onset of the spring flooding season, work must be completed on the terminal segments of the indicated gas pipelines and also on segments of Glavyuzhtruboprovodstroy, Glavukrneftegazstroy and Glavsredazneftegazstroy. In the

second quarter, the Yelets-to-the-state-border section of the Yamburg-Western USSR Border gas pipeline should be turned over, and it is planned to promote work on the two-strand system of the Northern Regions of Tyumen Oblast (SRTO)-Urals gas pipelines. The erection of the first section—616 kilometers of the new 2,350-kilometer gas pipeline from northern Tyumen Oblast to the Omak-Novosibirsk-Novokuznetsk section (entrusted to Glavsibtruboprovodstroy, Glavvostoktruboprovodstroy and Glavukrneftegazstroy collectives) will enable the delivery of gas to Siberian and Kuzbass [Kuznetsk Coal Basin] enterprises to be increased.

The large Gazli-Chimkent and Minsk-Vilnius gas pipelines and the Orenburg-Ufa condensate pipeline are to be turned over by Glavsredazneftegazstroy, Glavtruboprovodstroy and Glavvostoktruboprovodstroy. It goes without saying that the program for building gas pipelines to the Surgutskaya, Permskaya, Zaporozhskaya and Talimardzhamskaya GRES's, and also taps to 35 cities and communities, should be carried out.

More than 1,300 kilometers of oil and petroleum-product pipelines must be built for USSR Minnefteprom [Ministry of Petroleum Industry] and USSR Goskomnefteprodukt [State committee for the Supply of Petroleum Product]. Glavsredazneftegazstroy and Glavturkmenneftegazstroy [Main Administration for Construction of Oil and Gas Pipelines in the Turkmen SSR] are erecting a section of great length on the Chimkent-Chardzhou oil pipeline. Glavtruboprovodstroy should assure the introduction into operation of the 200-kilometer terminal segment of the most huge Tengiz-Guryev-Astrakhan-Groznyy oil pipeline, which is almost 1,300 kilometers long, and also of a 125-kilometer segment on the Yaroslavl-Kirishi oil pipeline. Glavyumentruboprovodstroy [Main Administration for Pipeline Construction in Tyumen Oblast] has a genuine possibility for turning the 110-kilometer Urengoy-Kholmogory oil pipeline over for operation ahead of schedule, in April of this year. Glavvostoktruboprovodstroy and Glavukrneftegazstroy must fulfill the task of introducing the Nizhnekamsk-Brezhnev and Velikiy Anadol-Melitopol petroleum-product pipelines.

About 2,000 kilometers of cable and radio-relay communications lines for 14 gas, oil and product pipelines are to be turned over for operation in 1988. An important task has been assigned to Glavneftegazselektrospetsstroy [Main Administration for the Construction of Special Oil, Gas and Electrical Facilities], whose share of which is 1,200 kilometers.

It is necessary to carry out a significant construction program at 43 compressor and pump stations due for early startup. The major portion of the tasks are assigned to Glavinterneftegazstroy (eight stations), Glavsibtruboprovodstroy, Glavyamburgneftegazstroy [Main Administration for the Construction of Oil and Gas Facilities at

Государственный заказ на ввод в действие капиталовложений производственных мощностей
за счет средств государственного финансирования по основным направлениям Миннефтегазострой на 1988 г.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Всего	Газовые трубопроводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы	Нефте- проводы
Газификация населенных пунктов, км	95,86,7	2346,1	2004,2	1022,8	225,1	612,5	—	—	—	—	—	16	—	937,4	1376,7	62,3	845,8	83,8
(20) II	5042,1	677,1	1049,9	872	200,2	254,1	—	—	—	—	—	—	—	559,0	646,2	—	838,3	83,8
III	485,7	300,7	30	30	1,4	40	—	—	—	—	—	16	—	55,6	796,5	62,3	—	30
IV	2857,9	1371,3	904,3	107,8	14,3	297,4	—	—	—	—	—	—	—	382,9	—	—	—	—
в том числе Государственный за- каз Советского Министров СССР	7981,4	1124,9	1782,5	900,2	110	254,1	—	—	—	—	—	—	—	485,7	1282,2	61	838,8	83,8
(21) II	4937,7	661,1	1022,8	872	110	254,1	—	—	—	—	—	—	—	518,7	646,2	—	838,8	83,8
III	30	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV	3183,7	477,8	689,8	128,3	—	—	—	—	—	—	—	—	—	110	837	61	—	—
Газификация населенных пунктов, км	3,87	—	—	—	—	—	—	1,87	—	—	—	—	—	—	—	—	—	—
(22) II	43	1	3	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
III	12	1	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV	21	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Нефтепроводы, км, тыс. м ²	300	70	—	—	—	40	60	120	—	—	—	40	—	—	—	—	—	—
(24) II	300	70	—	—	—	40	60	120	—	—	—	40	—	—	—	—	—	—
IV	110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Кабельные и радиотелевизионные за- водские связи, км	1585,2	48,5	378,3	116,1	—	47	—	—	—	—	—	—	—	206	—	—	—	1186
(25) II	3772,53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
III	1/10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV	2/78,5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Всего	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(26) II	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
III	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV	214	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Газификация населенных пунктов, км	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(27) II	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
III	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IV	214	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Key

1. Total
2. Main Administration for Pipeline Construction in Tyumen Oblast
3. Main Administration for Pipeline Construction in the Eastern Regions
4. Main Administration for Pipeline Construction in Siberia
5. Main Administration for Pipeline Construction in the Tatar ASSR
6. Main Administration for Pipeline Construction in the Southern Regions
7. Main Administration for the Construction of Oil and Gas Field Facilities
8. Main Administration for Construction of Oil and Gas Enterprises in Tyumen Oblast
9. Main Administration for Construction of Gas Industry Enterprises in Urengoy
10. Main Administration for Construction of Oil and Gas Industry Enterprises in Yamburg
11. Main Administration for Housing Construction in West Siberia
12. Main Administration for Construction of Oil and Gas Industry Enterprises in the Bashkir ASSR
13. Main Administration for Construction of Oil and Gas Industry Enterprises in the Tatar ASSR
14. Main Administration for the Construction of Oil and Gas Industry Enterprises in the Ukraine
15. Main Administration for Construction of Oil and Gas Industry Enterprises in Central Asia
16. Main Administration for Construction of Oil and Gas Industry Enterprises in the Turkmen SSR
17. Main Administration for Construction of International Oil and Gas Industry Enterprises
18. Main Administration for the Installation of Oil and Gas Industry Facilities
19. Main Administration for Special Construction of Gas-Industry and Power-Engineering Facilities
20. Gas, oil and product pipelines, kilometers
21. Including State Order of the USSR Council of Ministers
22. Gas refineries, billions of cubic meters per year. State Order of the USSR Council of Ministers
23. Compressor and pump stations, each
24. Oil vessels, thousands of cubic meters
25. Cable and radio-relay communications lines, kilometers
26. Installations for comprehensive treatment of gas, units/billions of cubic meters
27. Prefabricated reinforced-concrete constructional structure and articles, thousands of cubic meters. State Order of USSR Council of Ministers

Yamburg] and Glavneftegazpromstroy [Major Administration for the Construction of Oil and Gas Field Facilities (six stations each). Half of the year's task for compressor stations (18 of them) must be carried out on the Yamburg-Western USSR Border and the Yamburg-Tula-I gas pipelines. Glavneftegazpromstroy and Glavyuzhtruboprovodstroy must support the initiative of the laboring collectives for introducing ahead of schedule

the linear portion of the Maki-North Caucasus gas pipeline and for turning over three compressor stations ahead of time on this line. Glavneftegazpromstroy, Glavredazneftegazstroy, Glavbashedneftepromstroy [Main Administration for Construction of Oilfield Facilities in the Bashkir ASSR], Glavtruboprovodstroy, Glavtyumenneftegazstroy and Glavyuzhtruboprovodstroy should introduce seven USSR Minnefteprom pump stations in unison with a pool of oil tanks on the Pavlodar-Chimkent, Kholmogory-Klin, Krasnoleninsk-Shaim-Konda and other oil pipelines, and also tank farms in Astrakhan and at the Ryazan site.

Complicated problems must be solved by Glavredazneftegazstroy and Glavtyumenneftegazstroy collectives on the introduction of capacity for treating 3 billion cubic meters of gas per year at the Mubarek and Noyabrsk gas-treatment plants. Glavyuzhtruboprovodstroy should turn over the product pipeline from the Noyabrsk GPZ [gas refinery] on time, and Glavurengoygazstroy should do so with the complex for compressing gas at the Gubkin GPZ.

The branch has established responsible tasks for USSR Gosagroprom [State Agroindustrial Committee], USSR Minstroyaterialov [Ministry of Construction Materials Industry], USSR Minkhleboproduktov [Ministry of Grain Products], USSR Minavtoprom [Ministry of Automotive Industry] and the RSFSR Council of Ministers. A brick plant will be built in Ukhta, a cold storage at Pechora, pastry departments at the bakery at Buguruslan, a department at Neftekamask for producing trailers, a department for printing in Bugulma, and other facilities.

The buildup of capacity for recovering gas continues. This year seven installations for the comprehensive treatment of 72 billion cubic meters of gas per year must be introduced.

The main growth (53 billion cubic meters) should be provided for at the Yamburg field. Glavyamburgneftegazstroy, Glavtruboprovodstroy, Glavneftegazmontazh [Main Administration for the Installation of Oil and Gas Industry Facilities] and Glavsibkomplektmontazh [Main Administration for the Installation of Completely Outfitted Modules in Siberia] must introduce installations for the comprehensive treatment of gas No 5 (in January) and No 6 (in the second quarter), make preparations for the conduct of starting-up and setting up operations at UKPG's [Integrated Gas-Treatment Plants] Nos 3 and 4, turn over 340 miles of headers and gathering arrays and water pipelines, and promote the construction of the Yamburg-Urengoy condensate pipeline. Glavneftegazpromstroy is to create capacity for the recovery of 3.5 billion cubic meters of gas per year at the Karachaganak field, Glavinterneftegazstroy—11.5 billion cubic meters of gas per year at the Stepov and Sovetabad fields, Glavturkmenneftegazstroy—capacity at the Uchadzi, Seyrah and Bagadzi fields.

Nine installations for treating crude, 107 cluster and booster pump stations, 10 oilfield compressor stations, 590,000 cubic meters of oil tanks, 2,300 kilometers of power transmission lines, and more than 5,000 kilometers of intrafield pipelines must be built in 1988 at West Siberian oilfields. Programs for the buildup of the oilfield facilities and the introduction into development of 17 new oilfields and the construction of 4 automated new-generation gaslift compressor stations should be realized, jointly with USSR Minneftprom.

Facilities for production purposes, housing, kindergartens and clubs for 21 plants and 3 automotive service stations will be erected at machinebuilding-complex construction projects.

Tasks for erecting automotive gas-filling stations are increasing considerably. Glavbashneftegazstroy, Glavturkmenneftegazstroy and Glavneftegazpromstroy are to build and introduce six such stations for 1,750 fillings per day.

The branch's main administrations must, jointly with USSR Minlesbumprom [Ministry of Timber, Pulp and Paper, and Wood Processing Industry] organizations, fulfill not later than the first half of the year the prescribed work volume on erecting the Tyumen housing-construction combine Tura, which will enable capacity for the output of 375,000 square meters of wood-panel housing per year to be started up.

The USSR Council of Ministers' state order for 1988 called for the introduction into operation of most important facilities for the in-house production base for producing 266,000 cubic meters of prefabricated reinforced-concrete constructional structure and articles, including 140,000 cubic meters at Surgut plants, which

will be built by Glavzapsibzhilstroy [Main Administration for Housing Construction in West Siberia] and Glavtyumenneftegazstroy. Glavbashneftegazstroy has been charged with the construction of facilities with a productivity of 52,000 cubic meters each in the Bashkir ASSR and Perm Oblast, and Glavyamburgneftegazstroy and Glavneftegazpromstroy have been given the same task for facilities with capacities of 40,000 and 25,000 cubic meters, respectively, in Nadym and at the Kulsary settlement.

Based on intergovernmental agreements with CEMA member countries, a program for building 62 facilities for the branch of industry during the 12th Five-Year Plan is being implemented. This year, 52 million rubles' worth of work on the erection of 22 important facilities is to be promoted and mastered. The facilities include the Novokuybyshev plant for producing 60,000 tons of polyethylene adhesive tape and wrapper and plants for completely fabricated housing construction, for the output of completely outfitted modules, and for the repair of heavy construction equipment and motor vehicles at Orenburg, Aksay, Neftekamsk, Kungur, Cheboksary, Noyabrsk and Binzil. Plants in Kiev, Lvov, Leninogorsk and some other facilities and production bases will be rebuilt.

The tasks that face the branch's organizations on introducing facilities into operation in 1988 are important, complicated and multifaceted. The Law on the State Enterprise (or Association), work on the collective contract, full economic accountability, and self-financing make mandatory the turnover of facilities on the prescribed deadlines. Successful fulfillment of the tasks depend upon the harmonious, conscientious work and initiative of laboring collectives and of each worker at all stages of the investment process.

11409

ORGANIZATION, PLANNING MANAGEMENT

Book Examines Dynamics of Price Formation in Machinebuilding

18230007 Moscow *PLANOVOYE KHOZYAYSTVO* in
Russian No 2, Feb 88 pp 126-127

[Review by V. Yefremov, doctor of economic sciences, under the rubric, "What the Prices of Machines Should Be," of book, "Dinamika tsen na produktivny mashinostroyeniya" [Dynamics of Prices for Machinebuilding Output], by A. G. Gogoberidze and A. A. Deryabin, Moscow: Financy i statistika, 1987, 159 pages]

[Text] The work assigns a central place to problems of the dynamics of prices for machinebuilding output in close correlation with scientific and engineering progress and the process of intensifying social production. The authors have, for the first time, tried to determine how price dynamics best helps to intensify the national economy and scientific and engineering progress (a decrease or increase) and to what extent price dynamics depends upon the methodology for setting wholesale prices for machinebuilding output and upon decisions adopted in centralized fashion in the management of price-setting.

The book begins with a survey of existing trends in the dynamics of prices, and a classification of the factors that influence the dynamics is cited. The authors note that at definite stages in the economy's development, interpretation of the factors of current economic practice which determine price dynamics is clearly mistaken: their influence only distorts the consistency of price movements. In the 1970's, a period of slowing of economic development, an increase in wholesale prices enabled severe socio-economic problems that were arising to be concealed, and for various sectors which were as one from the standpoint of creating an appearance of economic wellbeing on their part, it was advantageous. The book cites the results of interesting computations performed by NIItsen [Scientific-Research Institute for Prices] over a long period of time (20 years), based on average wholesale prices of the most important types of machinebuilding output. The indicators of average wholesale prices reflect an increase for customers in the real cost assessment of the equipment. However, as the authors note, one can judge effectiveness of the trends in price movements only by comparing the changed price levels with the economic benefit obtained from the customer's introduction of the machinery.

Conversion of the economy to a primarily intensive basis requires a reorientation and the creation of price dynamics which, during an acceleration of socio-economic development, should provide for a reduction in the cost of a unit of useful benefit obtained from production of the new equipment. Therefore, in the author's opinion, it

is desirable also to use price movements as a powerful lever for reducing prime production costs. The book gives a historical analysis of the policy of price reductions.

Control of price dynamics is an effective path for implementing a price-cutting policy. The authors propose to establish planning standards for price reductions by branch, subbranch, association and enterprise, taking into account the factors that characterize the level of development of the objects of planning, and also the nature of the output they produce. Such an approach to modern theory and practice of price-setting is basically new. One can concur with the authors' statement that use of the standards method for reducing prices will denote that the prerequisites of an "antiexpenditures" economic mechanism has been formed.

The work pays special attention to an analysis of the dynamics of expenditures in correlation with the dynamics of profitability in machinebuilding. The authors view critically the system of indicators for change of expenditures. The principles of the shaping of expenditures and their movement within the machinebuilding branches are founded on the classification and singling out of a number of factors that determine their level. The factors are analyzed in the light of material and labor expenditures and the depreciation of fixed capital. The research on the relationship between price dynamics for the implements of labor and the dynamics for the subjects of labor is of interest. The research data is buttressed by practical calculations.

Profit accounts for no more than one-sixth in the price structure for the output of machinebuilding branches. However, the amount and the standards for net profit emerge as price-setting factors. Unfortunately, the authors do not pay enough attention to problems of profitability of production connected with the conversion of enterprises (and associations) to full economic accountability and self-financing, and they examined them only from the point of view of the dynamics of profitability.

The book studies in detail question of the methods of and practice in determining the economic effectiveness of machinebuilding output relative to price-setting. A substantiated computation of economic effectiveness is necessary so that the acceleration of scientific and technical progress and the mastery and use of basically new machines, instruments and equipment which sharply increase labor productivity may be stimulated by means of prices. A. Gogoberidze and A. Deryabin come to the conclusion that the economic incentive mechanism being used is not operating satisfactorily. The monograph examines deficiencies of the incentive methods used. It is noted that the methods for reimbursing initial expenditures for the development and mastery of new output being used does not fully promote creation of the best economic environment for accelerating scientific and engineering progress. The enormous resources

united in the capital are being used without the necessary yield. Under self-financing and the granting of bank credits, the direct and unreimbursed financing of expenditures should be changed, in the authors' opinion.

An important part of the mechanism for economic incentives for scientific and engineering progress is the setting of prices that will create material incentives for the producers to assimilate most rapidly the large-scale production of new models of output. A major place is assigned in the work to a study of the problem of calculating prices that are stimulating, by various methods that have been adopted in price-setting methodology over the last two decades.

In the concluding chapter the authors assert with justification the necessity for reducing prices for the implements of labor, both for the new and the obsolescent.

The main areas for restructuring the methods for justifying prices for new machinery that the authors have formulated serve as a component part of improvement of the economic mechanism. Methodological principles for settlements are examined in detail, and the sphere of action of contractual prices as an important modern factor in accelerating scientific and engineering progress are disclosed. The monograph cites many figures and much computational data that illustrate the conclusions and theoretical principles. Nevertheless, the authors have not adequately validated economically and studied the correlation of a combining of the principles of rigid planning for price reductions and the use of contractual prices for machinebuilding output. In a comparison with the material and depreciation components of expenditures for producing machinebuilding output, they did not manage to reveal completely such a structural component as labor. The book contains many debatable and controversial propositions. However, despite the deficiencies noted above, and others, the monograph of A. Gogoberidze and A. Deryabin make a considerable contribution to development of the theory of price-setting for equipment and it can be useful for scientific and practical workers. COPYRIGHT: Izdatelstvo "Ekonomika". "Planovoye khozyaystvo". 1988

11409

Enterprise Ties Cannot Be Established by Direct Order

12320026 [Editorial Report] Moscow SOTSIALISTICHESKAYA INDUSTRIYA FOR 28 April 1988 carries on page 1 a 1300-word article entitled "Interest Pulls

Down the Barriers." The subtitle asks: "Why Does a Partnership Dictated by Ministerial Order Lead to Failure, but an Initiative from Below Guarantees the Fruitful Cooperation of Two Collectives?" Correspondent Zh. Tkachenko reports from Vinnitsa on the agreement to work jointly, initiated by the directors of two plants, the Vinnitsa Radio Technical Apparatus Plant and the "Terminal" Production Association. Cooperation works well for them and the abilities of the two plant complement each other. However, V. Noskov, reporting from Gorkiy, relates the case in which the ministers of the Automobile Industry and Chemical Machinebuilding signed an agreement in which the Gorkiy Automobile Plant was to manufacture parts for enterprises of the Ministry of Chemical Machine Building. Here, cooperation was unsuccessful. The following statement from the [unidentified] Department of Machinebuilding and New Technology sums up the situation.

"Each of these histories reflects in itself the characteristic peculiarities of the current changeover period in the life of collectives, in the establishment of their relations.

"Modern production is incomprehensible without cooperation, without the constantly arising and changing ties between enterprises. But so many obstacles and barriers stand in the way, especially if the connecting threads from one department to another are stretched. And how often are we convinced: attempts to build bridges with the help of orders or instructions from higher organs are powerless if there is no direct interest of the partners. And here is a typical example. The signatures of two ministers is at the bottom of the order strengthening cooperation between the Gorkiy Automobile Plant and enterprises of the Ministry of Chemical Machine Building. But there has been no cooperation." At the same time, there have been no ministerial orders and it was not necessary for two Vinnitsa collectives to organize joint production. However, their cooperation was born out of the understanding of the economic benefits for both partners. This understanding was arrived at not through a command from above, but by the most natural way—through the basis of common interests. There are no departmental barriers in the face of such a stimulus. "Life practice confirms again and again the fruitlessness of cooperation "by order." To base one's hopes only on the force of a command from above means to doom production to unavoidable breakdowns and gaps. Under the conditions of khozraschet the most farsighted way toward reliable cooperation is the free search for direct, optimal ties."

CIVIL AVIATION

Collegium Examines Trans-Siberian, Trans-Asiatic Routes

18290079a Moscow VOZDUSHNYY TRANSPORT in
Russian 31 Dec 87 p 2

["Expand International Cooperation"—VOZDUSHNYY TRANSPORT headline]

[Text] A session of the Ministry of Civil Aviation Collegium, which examined the question "On the Condition and Prospects for the Development of Trans-Siberian and Trans-Asiatic Routes Within the USSR Air Communications System With Foreign Countries," has been held.

The Collegium pointed out that definite work has been done in the Ministry of Civil Aviation to implement the decisions and directives of the 27th CPSU Congress and the subsequent CPSU Central Committee plenums on restructuring and improving the effectiveness of foreign economic activity, which is aimed at expanding USSR air communications with foreign countries. In this regard, it was pointed out that the Trans-Siberian and Trans-Asiatic routes occupy a leading place in the international air communications system of the USSR.

The high economical operation and commercial efficiency of flights on the trans-Siberian and trans-Asiatic routes evoke steady interest within foreign aviation companies in cooperation with Aeroflot, creating objective preconditions for the further all-round development of the USSR's air communications with foreign countries.

The following fact graphically illustrates the dynamics of the development of flights on the trans-Siberian route: whereas only three airlines with a total number of 12 flights a week flew across Siberia in 1986, the number of airlines will grow to seven on 1 April 1988 and the number of weekly trips to 34. In turn, Aeroflot will increase the frequency of flights from points in Western Europe to Tokyo to 14 flights a week during the summer of next year. It was pointed out that such a significant jump in the expansion of the trans-Siberian routes became possible not only due to the fact that direct flights began in 1986 on this route but also — to a certain degree — in connection with the new flexible approach that has been developed by the Ministry of Civil Aviation toward the conditions for cooperating with foreign airlines during their operation.

During recent years, flights on the trans-Asiatic route, which has received the status of a direct one, have acquired special significance for foreign ferrymen. At the present time, airliners of 18 foreign airlines, traveling from Europe across the territory of the USSR to the countries of Southeast Asia, are making more than 100 trips a week.

A contractual and legal basis for further expanding and increasing the effectiveness of Aeroflot's operation of the Trans-Siberian and Trans-Asiatic routes, has been established.

Along with this, still unresolved problems in the expansion of these routes with the Chinese People's Republic, India, Iran, and Pakistan as well as unused reserves in performing more effective commercial work on these routes and in searching for new forms for cooperation with the foreign countries (business class, joint enterprises, and compensation agreements) were pointed out.

Serious shortcomings exist in servicing the foreign passengers and aircraft that are making trips on these routes. The measures, which have been taken to improve service standards, still do not provide the expected results. The shortcomings in organizing the transport process do not permit the design capacity of Sheremetyevo-2 to be used effectively.

The technical and air navigation equipment of these routes and the provision of alternate airdromes, which are suitable for receiving foreign wide-bodied aircraft, require considerable improvement.

The resolution, which was adopted on the question being examined, specifically pointed out that it was necessary to take steps to further intensify the work of expanding cooperation with foreign civil aviation departments and airlines on the trans-Siberian and trans-Asiatic routes; to conduct on a broader basis the search for new forms of cooperation with foreign airlines; to take steps for the effective use of the commercial rights that have been received by Aeroflot to grant foreign airlines the right to fly on the trans-Siberian and trans-Asiatic routes; to prepare proposals for the effective use of the designed capacities at Sheremetyevo-2 airport under the conditions of a significant increase in flights of foreign airline wide-bodied aircraft; to examine the possibility of expanding the list of rights-of-way used for international flights on the trans-Siberian and trans-Asiatic routes in order to improve their efficiency; to develop a plan of measures and to perform a series of work during 1988-1990 to equip these routes with modern radio navigational equipment; to develop a plan of measures to bring the airdromes, which are included in the list of alternate ones for these routes, up to standards that insure the acceptance of foreign airplanes with passengers on board.

The Ministry of Civil Aviation also examined the question "On the Work With Letters." The appropriate resolution was adopted on the question discussed.

08802

Irkutsk Airport Reconstruction

182900796 Moscow VOZDUSHNYY TRANSPORT in
Russian 7 Jan 88 p 1

[Interview with A. Sokolnikov, chief of the East Siberian Administration of Civil Aviation, by G. Denisyuk, VOZDUSHNYY TRANSPORT public correspondent; date and place of interview not given; first paragraph is VOZDUSHNYY TRANSPORT introduction]

[Text] Three decades ago, the Irkutsk airport was one of the first in the country to accept the TU-104 aircraft and the airplane began to operate from it a little bit later. At the time, the runway there was up to technical requirements. However, today the time has come for its large scale reconstruction. A great number of questions from operators and the thousands of passengers, who travel through this very large transport crossroads of the country, arise from this. Our public correspondent asked A. Sokolnikov, the deputy chief of the East Siberian Administration of Civil Aviation, to tell us how the preparations for the reconstruction are going.

[Answer] Before 1992, it will be necessary to reconstruct the runway with a water drainage system, replace the antiquated light signaling equipment, expand the hanger for servicing TU-154 and IL-76 aircraft, and construct a mechanization base for 75 machines and cleaning structures. The main concern today, however, is the runway. The first phase of the work to reconstruct it will begin in April of this year and will last until 10 October. During this period, TU-154 and IL-76 airplanes will forsake Irkutsk. Only AN-24, YAK-40, L-410, AN-12, AN-26, and AN-2 will operate on the open portion of the runway. We have developed and the oblispolkom has approved a schedule for the air transport servicing of passengers during the reconstruction period. The Bratsk airport has been selected for the temporary basing of TU-154's. Transport to the western and eastern rayons of the country will be carried out through it.

[Question] For example, I want to fly to Moscow or Sochi. How will the route be organized?

[Answer] An entire complex of measures will assure the mating of the trips which will arrive in Bratsk from Irkutsk. The delivery of passengers from the northern cities and rayons of the oblast, such as Bodaybo, Kirensk, Ust-Kut, and others, to Bratsk — bypassing Irkutsk — has also been provided for.

[Question] The Bratsk airport is already operating in a rather strained manner now; will it manage a load that has grown many times?

[Answer] The reconstruction of an airport is a matter that is completely normal for Aeroflot. Passengers remember how the Vnukovo airport was closed for a protracted time and Krasnoyarsk — at the end of the Sixties. At the time, the Bratsk airport collective assumed part of the passenger shipments and coped with

this additional load well. Of course, the task is now a little more difficult. That is why we have already decided the question of relieving the Bratsk airport of firstclass transit aircraft that are traveling from Yakutiya, Magadan, Petropavlovsk, and other cities. Railroad, river and automotive workers will assume a portion of the passenger traffic. The Ulan-Ude and Chita airports will also operate in the flight schedule. It is planned to send AN-24 aircraft to eastern Siberia from other civil aviation administrations and to add ground equipment; aviation fuel stocks will be increased. True, our requests for additional fuel assets for motor vehicles and for certain types of special machines have still not been approved. This disturbs us quite a bit.

The main concern is the placement of the numerous watches of aviators. Using assets transferred to shared housing construction, the Bratsk gorispolkom will allocate quarters significantly ahead of the planned timeframes to the specialists who arrive from Irkutsk. In addition, the Bratsk airport itself will be the client for the construction of a house for its own aviation workers.

The capacity of the existing air terminal in Bratsk will be considerably increased. The oblispolkom has required trade organizations to be concerned about feeding passengers. A post office, intercity telephone communications, various kiosks, and a barber shop will be available to them. The airport will have a hotel with 318 beds.

[Question] Who will be the main performer of the work?

[Answer] The reconstruction of the Irkutsk airport has been entrusted to the collective of Civil Aviation SMU-11 [Construction and Installation Administration-11]. Our common task is to reduce the construction time to a minimum and to organize the uninterrupted delivery of concrete so that the work can be performed around-the-clock. The strategy is as follows: to prepare a third of the runway during the summer months so that it will be able to receive firstclass aircraft after the construction of the ramp. After the winter break, the next spurt will be the reconstruction of the remaining portion of the runway. Reducing the work time is in the common interest of the passengers themselves and Aeroflot. We will strive for this.

08802

Sheremetyevo Automatic Landing System Tested
18290079c Moscow VOZDUSHNYY TRANSPORT in
Russian 12 Jan 88 p 1

[Article by D. Khrapovitskiy, VOZDUSHNYY TRANSPORT special correspondent: "Automatic Equipment Lands the Airliner"; first paragraph is VOZDUSHNYY TRANSPORT introduction]

[Text] Operational testing of a system for automatically controlling the landing of an airplane, which was developed for flights under ICAO [International Civil Aviation Organization] Category III minimums, are taking place at the Moscow Sheremetyevo airport. It has been installed on an IL-62M. Our correspondent is on board this flying laboratory.

It is not necessary to talk about how necessary this system is for Aeroflot aircraft. Everyone remembers the October fog of last year. At that time, more than 2,000 flights were delayed. A total of 337 aircraft, which had flown to Moscow, landed at alternate airdromes, literally bringing down 40,000 additional passengers on the heads of Leningrad, Kiev and Gorkiy airport workers. All of them needed rest, food and ... information about their prospects. The question: "Will there be a time when our civil aviation is all-weather?" sounded rather frequently at the time.

A call from Sheremetyevo: An IL-62M has begun operational tests, carrying out landings under ICAO Category III, which is what they have in mind when they talk about all-weather aviation....

The aircraft moves to take off. Anatoliy Chentsov, a pilot inspector from the CEMA Civil Aviation Center, is in the left-hand first pilot's seat. Aleksandr Menshchikov, an aircraft commander representing the International Air Services Central Administration, is in the right-hand seat in the position of the copilot.

Information on the other crew members — a little bit later. It is necessary now to add that these flights are for Chentsov the beginning of the implementation of the statute, which was approved by the minister of civil aviation more than five years ago on flight crew mastery of a new piloting and navigation complex (SAUIT-3) during the operational testing stage. For Menshchikov, the present flights are the acquiring of new skills.

We descend from the clouds to an altitude of 100 meters. Mikhail Skubiy, the navigator, counts outloud:

"80! 70! 60!"

There is no dictation of such altitudes during landings under ICAO Category II. After the 1st, there will be none even during landings under Category III.

Nikolay Strukov, the flight engineer, squeezes in just as collectively and clearly:

"Stand-by on."

I will try to insert myself into this reporting space, which has been compressed by the landing, so that it will be clear what this "stand-by" is. Strukov's phrase consisting of two words means that the descent process is taking place normally and that a reserve channel was switched into the main operating channel of the automatic control system at an altitude of 60 meters. After this, if some trouble arises, the control system itself will turn off the faulty channel and will be completely serviceable.

The metronome voice of Mikhail Skubiy counts the altitude: "50! 40! 30!"

There it is — the runway of the Sheremetyevo airport approaching the aircraft.

"20!"

Then, something unexpected occurs.

Chentsov suddenly says: "We are leaving." The aircraft, which had gone down to eight meters, travels upwards for a second pass. The automatic equipment controls this maneuver.

However, everything was a surprise only to me. If the pilot does not see the ground by the time to make a decision (to land or to go around again), it is necessary to make another pass. We saw the ground well. However, second passes, which the automatic machinery carries out, are included in the testing program. Very ordinary "working" Aeroflot crews have begun to acquire skills under ICAO Category III flight conditions. They must be confident of the automatic equipment's capabilities to direct such maneuvers by an aircraft in the fog. Similar second passes have been incorporated in the program for this purpose. When he commanded: "Depart!", Chentsov simultaneously pressed a white button on the control wheel, switching on the appropriate program.

After the "box", there was a new landing approach. Again the black and white landscape of Sheremetyevo's surroundings. Red grass. Again the miserly dialogue of the crew controlling the automatic equipment and prepared at any moment to assume control. At an altitude of 30 meters, the system disconnects from the glide radio beacon. It performs descent and landing automatically — with the help of special leveling computers.

I will testify that the wheels touched the ground softly and the tension in the cabin lessened despite the fact that the control of the aircraft after landing takes place "manually".

Take-off, landing. So it was all day. They refueled us. Chentsov left in order to fly to Khabarovsk where the pilot inspector also had business. A. Menshchikov sat in the left-hand seat, and P. Mezentsev, a second pilot — in the right-hand one. Ye. Yulin, the flight radio operator, was continually at his position. Those people, without whom these tests could not take place — M. Pkhor, a representative of the manufacturing organization and one of the designers of the system being tested; and S. Aleksanyants and M. Sadkovskiy, senior scientific associates in the Scientific Experimental Center for Civil Aviation Air Traffic Control Automation — performed their watch in the cabin.

It was already evening when the work day ended and the IL-62 taxied to its parking place. Commander A. Menshchikov said in an already earthly and not minced regulation voice:

"Thank you lots for your system."

According to the laws of the genre, it would be necessary to finish the report with this phrase; however, another phrase of the commander had sunk into my memory:

"I am now training for Category III, but I will forget everything in a year."

There is no confidence that we will overcome the barrier of ICAO Category III soon and that such flights will become standard tomorrow. There are many problems here — both the preparation of airdromes and the preparation of the crews and aircraft equipment — and the problems of strategy. Articles on this subject will continue in future issues of VOZDUSHNYY TRANSPORT.

08802

USSR-Italy Air Agreement Signed
18290079d Moscow VOZDUSHNYY TRANSPORT in Russian 12 Jan 88 p 1

["In The Interest of Two Countries"—VOZDUSHNYY TRANSPORT headline]

[Text] On 11 January, A. N. Volkov, USSR minister of civil aviation, received (Umberto Nordio), president of the Italian Alitalia airline, who had arrived in the Soviet Union for an official visit at the invitation of the Ministry of Civil Aviation.

An exchange of opinions on matters pertaining to cooperation between Aeroflot and Alitalia occurred during the meeting which had a friendly and constructive nature.

A supplementary protocol to the intergovernmental agreement on air communications between the USSR and Italy was signed that same day. A. N. Volkov and S. Romano, the Italian ambassador to the USSR, signed the document.

Let us recall that regular air traffic between the two countries began on 20 April 1965 with the flight of an Aeroflot aircraft on the Moscow-Rome route based on a protocol that was signed between the USSR and Italian civil aviation departments. An intergovernmental air communications agreement, which opened up new opportunities for expanding air traffic between our countries, was concluded on 10 March 1969. A supplementary protocol to the intergovernmental agreement and a commercial agreement, which defined the conditions for operating the Rome-Moscow-Tokyo route — on which regular flights began in 1973 — were signed simultaneously in September 1971.

Aeroflot makes five regular trips a week between the USSR and Italy in IL-86, IL-62 and TU-154 aircraft on the Moscow-Rome and Moscow-Milan routes and one

trip on the Rome-Moscow-Tokyo route in both directions. Besides the regular flights, Aeroflot made more than 200 additional and chartered trips last year. The total number of passengers was approximately 90,000.

An understanding on the conditions for Alitalia making direct flights to Tokyo on the trans-Siberian route in wide-bodied Boeing-747 and DC-10 aircraft, which was set down as a new supplementary protocol that replaced the 1971 protocol, was reached in November of last year between the USSR Ministry of Civil Aviation and the Italian Ministry of Transport. In accordance with this important document, the Italian airline was granted the right to make direct flights between Rome and Milan and Tokyo in an easterly direction but with a landing in Moscow in a westerly direction (Tokyo-Rome).

In turn, Aeroflot received the right to make two trips a week between Rome and Tokyo with a stop in Moscow using IL-62 airplanes. An understanding was also reached to increase the number of regular flights made by Aeroflot and Alitalia between the USSR and Italy from four to eight trips a week for each aviation enterprise.

In order to meet the desires of the Italian party, the Ministry of Civil Aviation gave Alitalia permission to make direct flights to Tokyo on the trans-Siberian route starting on 24 October 1987. At the present time, Alitalia Boeing-747 aircraft fly twice a week from Rome to Tokyo as well as in the opposite direction.

The signing of this new important document is a result of many years of mutually beneficial cooperation between the civil aviation departments of the two countries in insuring commercial, economic, scientific, technical, and cultural ties between the Soviet Union and Italy.

08802

Trezubov Appointed Chief Magadan Aviation
18290079e Moscow VOZDUSHNYY TRANSPORT in Russian 12 Jan 88 p 2

["Chronicle"—VOZDUSHNYY TRANSPORT headline]

[Text] Viktor Grigoryevich Trezubov has been appointed chief of the Magadan Administration of Civil Aviation. He has been released from his position as the administration's deputy chief for organizing flight operations.

08802

New Kishinev Runway
182900789 Moscow VOZDUSHNYY TRANSPORT in Russian 7 Jan 88 p 1

["Shipments Become Effective"—VOZDUSHNYY TRANSPORT headline]

[Excerpt] A TU-154 has landed in Kishinev for the first time. A crew, which was headed by M. Tereshchenko, pilot first class and chief of the Ministry of Civil Aviation Main Flight Service Administration, brought it from Moscow.

It became possible to receive aircraft of this class and ones with a larger rated load capacity thanks to the commissioning of a new runway.

The replacement of the TU-134, which had been used, with the TU-154 on one Moscow route alone will provide an annual savings of approximately 6,000 tons of fuel.

08802

Civil Aviation Minister on Restructuring
18290058a Moscow GRAZHDANSKAYA AVIATSIYA in Russian No 11, Nov 87 pp 2-5

[Article by Col Gen of Aviation A. N. Volkov, USSR minister of civil aviation and USSR honored military pilot: "Restructuring Is a Continuation of October's Work"]

[Text] I am firmly convinced that each aviator has turned more than once in his thoughts and deeds to the 70th anniversary of Great October and compared what has been done in honor of the glorious jubilee with those tasks that the party has put in front of us during the present and extremely important stage in the development of the Soviet country. In my opinion, it must not be otherwise: You see, urgent work on the labor front of the five-year plan is the best way to celebrate this important anniversary.

In greeting the glorious jubilee, civil aviation workers, just as all Soviet people, note with satisfaction that no other event can be found in the entire centuries-old history of mankind which can be compared with the Great October Socialist Revolution in its scope, depth and enormous transforming force. No matter how our foes try to disparage October's influence on the course of human development, they will never achieve their goal because it is impossible to silence the real achievements of socialism and to shut oneself off from those processes that are occurring in the modern world under the influence of our revolution's ideas.

That is why we say with complete justification that the 70th anniversary of October is a great holiday of the Soviet people and a holiday of the people of the socialist

point in the history of civilization and the path toward a new socialist world. It is no accident that more than a third of our planet's population have already cast off the fetters of capitalist exploitation today.

At the same time, the anniversary of October is a frontier for each one of us, from which one must interpret the results and lessons of the path that has been traveled, the changes that are occurring in the world, and the new tasks facing Soviet society.

Our achievements during the past 70 years are indisputable. Great October and socialism have inscribed peace and the equality of peoples on their banners and have delivered working people from exploitation and unemployment. We have no national oppression, no poverty and no illiteracy. All workers are confidently looking forward to tomorrow. Free medical care and a state concern for motherhood, children, war and labor veterans, and the aged have become customary norms of life. Successes in the cultural area are substantial. The victory of October secured real rights and freedoms for every individual and confirmed the power of the soviets, which was born from the historic creativity of the masses themselves.

However, it was not easy to achieve all this. Severe tests and difficulties awaited the pioneers: the economic chaos and ruin that was caused by the civil war, continuous imperialist pressure and blackmail during the following years, Hitler's aggression that carried away the lives of 20 million Soviet people, and the very difficult reconstruction period. All of this had to be overcome and endured by our people.

A dear price was paid for deviations from Lenin's principles and methods for constructing the new society, for violations of socialist legality and the democratic norms of life, for voluntaristic mistakes, for dogmatism in thinking, and for inertia in practical actions.

However, all of this does not disparage the fact that today we possess what the party and the people, who are being guided by it, accomplished while undergoing these tests. We well know that enormous creative opportunities have been embodied in our socialist system and that all of the Soviet people's notable achievements have been linked with the activity of the Communist Party. That is why we talk about the 70th anniversary of Great October with pride and respect for the shining memory of those who did not spare their lives in the struggle for the cause of the revolution.

Today, our country is again being tested for dynamism and for the ability to rise rapidly through the stages of progress. In a short period of time, it is necessary to insure a qualitative change for the better in the economy, to purify the moral atmosphere in society and to reject decisively everything that interferes with forward economic

M. S. Gorbachev pointed out in his report at the June 1987 CPSU Central Committee Plenum: "The reconstruction, which has been unfolded in the country, is a direct continuation of the work of October and a consistent realization of the ideals that were inscribed on the banner of our revolution....

"Restructuring is a response to the historic call of the times. Our party and our people will be able to respond to it as they responded when they completed the very great social revolution, constructed socialism and won a universal historic victory in the Great Patriotic War.

"It has always been so when tasks of an historic choice face us."

Along with the entire country, our civil aviation is also in the steep stage of restructuring, which was begun based on the decisions of the April 1985 CPSU Central Committee Plenum and which is being directed by the party in accordance with the program directives of the 27th CPSU Congress. A child of Great October that was born upon V. I. Lenin's initiative and carefully nurtured by the Communist Party, it is today traveling a difficult, but correct, path of accelerated development — the path of renewal. Processes, aimed at the shift of air transport to a new qualitative status that would be more fully responsive to the ever growing public needs, are being expanded ever more energetically in the branch. Positive changes have been noted in the organization of aviation production and in the improvement of qualitative indicators. Airplanes and helicopters have begun to be used more rationally, labor productivity is growing, and the specific consumption of aviation fuel is being reduced. A new moral atmosphere is taking shape in labor collectives and glasnost and criticism are being expanded. Public opinion is becoming more and more impatient with negative phenomena. As a result, the overwhelming majority of civil aviation administrations and enterprises are successfully coping with state tasks and their adopted socialist obligations. Many aviation collectives have included themselves in answering the CPSU Central Committee appeal to the Soviet people to compete in greeting the 70th anniversary of Great October in a fitting manner. They are keeping their word and have already fulfilled the state plan for the first two years of the five-year plan. The best of them, who have achieved the highest technical and economic indicators and quality in air shipments, have been awarded the jubilee Diploma of the CPSU Central Committee, USSR Council of Ministers, AUCCTU, and Komsomol Central Committee.

Continuing the glorious traditions of the older generations of aviators who moved in the vanguard of the Stakhanovite movement of the Thirties, who performed heroic deeds during the period of the Great Patriotic War and who blazed the first jet air routes inside the country and abroad, the workers in the skies of the Eighties are multiplying the successes of the branch.

Today, thousands and thousands of outstanding workers, who are devoting all the ardor of their hearts to the task of restructuring and to increasing the contribution of civil aviation to the realization of the tasks of the 12th Five-Year Plan, are in our formation. With pride, we mention the name of N. Ozhiganov, a delegate to the 27th CPSU Congress and a TU-154 commander; IL-86 commander A. Kaledin and AN-2 commander N. Saridov, USSR Supreme Soviet deputies; B. Kachuro and A. Pushkin, USSR honored pilots; stewardess T. Zinchenko, USSR State Prize winner; and others. Dozens of aviation workers have been singled out by Soviet civil aviation prizes imeni P. F. Yeromasov, a Hero of the Soviet Union and Aeroflot pilot, and by Leninist Komsomol prizes; they have been awarded the title of honored transport worker of the RSFSR and other union republics. Aviation youth, who have selected our winged profession as their life work, take an example from them and are equal to them.

In a word, the shock watch of the anniversary year has convincingly demonstrated that civil aviation is on the rise. However, it is still early to be complacent with what has been achieved and to talk about radical changes. Aeroflot is only at the beginning of the long journey that was outlined in the 12th Five-Year Plan and we are still far from reaching the required altitude. Unfortunately, restructuring is still being swung around slowly in a number of aviation collectives. The force of inertia and the habit of stereotypes and set patterns still prevail among part of the aviation workers, including different categories of directors. The braking mechanism is especially tenacious in people's psychology. Some people have no objection to talking about restructuring but — in fact — they think and work in the old way, without burdening themselves with initiative and the search for unused reserves.

Civil aviation shifts to working under the new management conditions, whose basis will be determined not by command and administrative but by economic methods of regulating production relationships, in January of next year. The first experience in working in the new way, which has already been accumulated by the Belorussian, Lithuanian and Komi administrations; Domoedovo Production Association and Aviaremont [Aviation Repair] plants, shows that the introduction of the new economic mechanism involves a fundamentally new situation both for the ministry and for the collectives subordinate to it. We are talking not about a partial improvement in the system for managing the activity of aviation enterprises and not about a cosmetic repair to the old production complex that took shape over the years but about profound qualitative changes in the content, functions, forms, and methods of all our work. Quite a few problems, which require immediate solutions, are arising here.

Meetings with aviation workers and letters to the Ministry of Civil Aviation speak to the fact that individual work collectives still do not clearly understand the

essence of the new management conditions and do not completely understand the ways to shift enterprises to self-support [samookupayemost] and self-financing conditions and introduce complete and stable cost accounting. Here and there, they only link work according to the new methods with an increase in salary and with the expansion of the social sphere although they well know that it is necessary to earn the assets for all this by their own labor and not to expect allocations from the state budget. There are still those who love to complain about the infringement on the independence of labor collectives and about the fencing in of every possible instruction "from above" and who themselves do not use the rights that have been granted to work collectives. Despite the work that has been done, unfortunately, the tactic of temporizing and — at times — even of fault-finding with the new economic reform has still not been overcome everywhere.

All of this requires from the command and directing staff, the economic services of the branch, political workers, and party and public organizations persistent efforts to form new economic thinking in the aviation workers and to overcome stagnant tendencies and phenomena. It is necessary to explain to each one clearly that restructuring is an irreversible process and that it is impossible to turn it back. It has reached the stage where initiative, creative searches, and the decisive incorporation of fresh ideas and non-traditional approaches are especially necessary.

A "round table" discussion in the Domodedovo Production Association entitled "The Test of Restructuring" was recently published in the magazine. It is necessary to point out that its participants raised many sharp questions in whose solution both the appropriate ministry administrations and departments and the directors of a number of administrations at the local areas should participate. The main thing, however, is that the Domodedovo people well understood that the mastery of the new management methods will depend primarily on themselves and that the one, who continues to think using the categories of the past, must inevitably move to the side of the road and leave the road to others.

Therefore, the friendly joint work of all management echelons — from the ministry staff to the aviation enterprise, subunit, brigade, and crew — is required for the success of the task. Only in this way is it possible to create conditions that permit the braking mechanism to be broken off at the root and allow it to be replaced with an acceleration mechanism.

During the present stage of civil aviation's development, special requirements are being imposed on improving the qualitative indicators of its work, especially on improving flight safety and regularity and passenger service standards. As the IZVESTIYA newspaper recently pointed out, Aeroflot has been our pride for many years — to some extent, a standard of order, service and service quality. We have become accustomed

to this and this has been welcomed, of course. Somehow, Aeroflot surrounded itself little by little and inconspicuously with a halo of inaccessibility and inviolability. This led to that which all of us distinctly saw after restructuring was begun in the country: A whole sea of problems — economic, social, moral, and many others — have accumulated behind the attractive Aeroflot sign. The urgent need for changes, which would be persistent and uncompromising, arose.

First of all, it was necessary to overcome the stagnant phenomena, which had taken shape in the organization of flight and instructional methods work, in the training and indoctrination of flight personnel, and in the establishment of normal production and living conditions for each crew member. It is in this that one of the main reserves for raising flight safety lies. The ministry Collegium is taking steps to raise the role of flight services, improve the prestige of flight specialists, and provide the necessary conditions for their fruitful work. Is it not a paradox that in the flying branch, which civil aviation is, its main worker — the pilot — was, as they say, in the background?

My entire life essentially has been connected with aviation and I well know that military flight specialists have always been and are different and enjoy special rights. In Aeroflot, even the commander of such a gigantic airliner as the IL-86 does not have any privileges and advantages. Meanwhile, more than 300 human lives and a machine costing several million rubles are his responsibility. How can one reconcile himself with such a situation? We have a right to expect from the recently created Flight Service Main Administration of the ministry, administration directors and flight subunits on the spot a radical review of their attitude toward the organization of flight operations and toward everything that is connected with the work, life and rest of flight personnel. Only under this condition is it possible to guarantee the high dependability of each flight.

There is another vulnerability for which Aeroflot has more than once been subjected to justified criticism — low air shipment standards. Actually, it is as if the level of passenger service both in airports and on board aircraft had congealed at the mark of the Eighties. It is not necessary to travel far for examples. Even in the Main Aviation Communications Agency that is located a hundred steps from our ministry building, such chaos and confusion reign that it is difficult to communicate in words. At the same time, this agency's collective has repeatedly been awarded prize positions in branch competition and has been set up as an example for others.

I well understand that the work of "ferryman" is not simple. It requires both the proper technical equipment and the establishment of normal production and living conditions for those who work with passengers. Our marble air terminal palaces, to whose construction practically primary attention was paid for many years, often do not have a rudimentarily equipped place for an

inquiry office. We have talked a great deal about the automation and electronics that are being incorporated into the service area, but people stand in line for hours and often move away from the ticket office without a ticket. All of this requires a fundamental reappraisal and the adoption of very effective measures to put things in order. What is especially necessary today, now, this very minute — if you wish — is to review the attitude itself toward the passenger. Service will never be raised to the level of modern requirements without sincere warmth and cordiality toward people and without daily attention toward them on the ground and in the air. It is necessary to take as an immutable law the fact that if a shipment service worker does not experience happiness from the fact that he is delivering happiness to those under his guardianship, he does not have any moral right to occupy that position.

Having acquainted myself with the work of our airports, I have repeatedly been convinced about how many opportunities for improving passenger service lie — so to speak — on the surface and are not being used in work. Take, for example, the service system that it is possible to organize based on the Law on Individual Work Activity. Trade in all kinds of souvenirs, the sale of confectionery or culinary items, small shoe and clothing repairs — all of these are insufficient, especially during evening hours. At the same time, the work in Aeroflot enterprises to involve workers in individual activity and to provide passengers services requiring payment is not only being performed very weakly but, at times, it even encounters a ban from some directors. It amounts to an illegal removal of licenses issued by the ispolkoms of local soviets and the interference of procurator agencies in these conflicts. The ministry's Collegium has adopted a special decree that obliges the directors of administrations and enterprises to expand services for the population and passengers, which require payment, as much as possible. I think that this important social and political measure will find a broad response in each aviation collective.

The accurate, smooth and highly productive work of the branch depends a great deal on accelerating scientific and technical progress and incorporating new and more improved aircraft, helicopters and ground equipment in our operations. In the mid-Fifties, when the first jet aircraft traveled on Aeroflot routes, a revolutionary jump was essentially made in the development of air transport. We are rightfully proud that our motherland became the pioneer of the jet age and significantly outstripped such large capitalist states as the United States, England, France, and others, in this regard.

Soviet civil aviation today occupies advanced positions in the world. It is sufficient to mention that Aeroflot aircraft and helicopters transport more than a half-million passengers daily. Enormous tracts of fields and forests are being cultivated and large-scale operations are being carried out in the national economy from the air. Aircraft with the USSR national flag are landing in 98

countries on our planet. The Soviet Union is one of the most respected members of the International Civil Aviation Organization — ICAO. It is providing energetic help to the aviators of the friendly socialist and developing countries. However, time does not stand still but puts forward new and more complicated problems.

Aeroflot workers are faced with the task of carefully preparing for the receipt of new aircraft: the IL-96-300, TU-204, IL-114, AN-74, and others; that the aviation industry will soon begin producing. An addition is also expected in the helicopter family. The work to incorporate automated air traffic control systems, to equip routes and airports with modern radio navigational and electronic complexes, and to master systems for automating and mechanizing production processes will also be continued.

The work is great and, I would say, capital-intensive. This is why it is necessary to radically review the structural and investment policy and to use each ruble of capital investment and each kilogram of metal and cement with a thrifty sharpness and enterprise. It is necessary to "pull up" the ground base for the receipt of the new aircraft and helicopters and to distribute them carefully among the country's regions, without tolerating their dispersal in the name of the false ambitions and hollow prestige that have been taking shape for years in some republics and large industrial centers.

It is necessary to understand that modern aviation equipment cannot be intelligently used under "field conditions". It must be concentrated in large and well equipped base airports. Only this way can the effective and dependable use of each aircraft and helicopter be achieved. This is the only true state approach, and we must firmly implement it.

No matter how improved the equipment and technology are, however, they will provide a return only when conscientious and highly qualified people, who possess a high sense of responsibility for the task entrusted to them, are working in each aviation collective. The need for a general improvement in the selection, assignment and indoctrination of aviation cadre and for a strengthening of discipline and organization at each work position comes from this. It is rightfully said that civil aviation is a branch which can not only be raised but also dropped. That is why serious adjustments are required in our system which has taken shape with respect to working with personnel. This primarily concerns the advancement of candidates to leading positions. It cannot be considered normal when casual people, who possess low business, moral and political qualities, get to be the directors of aviation collectives. You see, 10 aviation enterprise commanders have had to be released from the positions they occupied during the last two years for abusing their official position and immoral conduct. The turnover in personnel for other reasons is also too great.

All this testifies to serious shortcomings in this important work and to the need for bringing it into strict compliance with the requirements of the 27th party congress and the January 1987 CPSU Central Committee Plenum.

On the eve of the anniversary of Great October, we are talking with special satisfaction about the enormous mobilizing strength of the socialist competition which aroused the Soviet people to achievements that had previously been unheard of during all stages in the history of our country. It is also playing an extremely important role in civil aviation. Nevertheless, it is necessary to admit frankly that firm Leninist principles — glasnost, comparison of results, the opportunity for a practical repetition of progressive experience — are often being cut out of it. The party has raised the question about the need for a radical restructuring of socialist competition in a spirit of the revolutionary transformations that are occurring in our society. Along with the Political Administration of civil aviation and the Central Committee of the aviation workers' trade union, the ministry's Collegium has analyzed the organization of work rivalry in our branch, has carefully weighed the approach that was previously practiced in selecting the forms and types of competition, and has drawn the appropriate conclusions. It is very important to deliver competition from rusty formalism and window-dressing and to direct it primarily toward the achievement of high qualitative work indicators — and, of course, not to lead it away in any manner from the solution of social problems. The aviator, who has achieved high indicators in work, should have priority in the satisfaction of social needs. Each should firmly know that if one works conscientiously, there will be a bonus for him, a pass to a holiday home, and a new apartment — before others. However, if you — so to speak — serve your time and perform your work within a limited range, you will not extract any recognition for your work.

Thus, the motherland of Great October is celebrating its 70th anniversary. It has arrived at this outstanding anniversary in the flowering of strength and creative daring. The success of the common task will depend a great deal on each worker in civil aviation. A great deal will be required from all of us and it is necessary to work strenuously in order to implement the transformations that have been outlined by the party and to carry out the policy of accelerating the country's social and economic development in deeds. This will be the specific contribution of aviators to restructuring the life of Soviet society, which is confidently moving along the path inscribed on the banner of our revolution.

COPYRIGHT: "Grazhdanskaya aviatsiya"

08802

Tupolev on TU-204

18290038b Moscow GRAZHDANSKAYA AVIATSIYA
in Russian No 11, Nov 87 pp 21-18

[Article by A. A. Tupolev, general designer and academician: "The Tu-204"; first paragraph is GRAZHDANSKAYA AVIATSIYA introduction]

[Text] In compliance with the "Basic Directions for the Economic and Social Development of the USSR During 1986-1990 and During the Period Out to the Year 2000" that was adopted by the 27th CPSU Congress, new and highly efficient mainline passenger aircraft will appear on air routes at the end of the 12th Five-Year Plan. One of them — the semi-mainline TU-204 that was designed in the Testing and Design Bureau imeni A. N. Tupolev — will complete its first test flights in 1988. A. A. Tupolev, general designer and academician, talks about the characteristics of the new aircraft.

The highly economical TU-204 passenger airplane is being developed by the Design Bureau imeni Academician A. N. Tupolev. The aircraft is intended for air routes up to 3,500 kilometers long and is expected to carry up to 214 passengers (in tourist class with a seat spacing of 810 kilometers). The TU-204 is being designed based on the latest achievements of science and technology in the area of aerodynamics, strength, engine construction, material research, and electronics. The design bureau's large amount of experience in the construction and operation of several generations of passenger aircraft is being used in its designing.

The main problems, which are facing the bureau in the designing of the aircraft, are the achieving of high flight technical characteristics and passenger comfort and the assuring of flight reliability and safety, high fuel economy and low operating expenses under conditions of intense operation.

New design solutions and materials are being developed and used during the designing of the aircraft and its systems.

Its high aerodynamic qualities, the use of low-noise turbofan engines with a high degree of dual circuitry, and the high weight improvement in the design of the aircraft and its systems permit a 1.5-2-fold better fuel economy to be achieved than that found in our modern domestic aircraft of this class. It is planned that the TU-204 will begin flying in 1988 and will be certified in accordance with civilian transport aircraft airworthiness norms that are common for the CEMA countries.

Distinctive Design Features

The designing of the aircraft during all stages was done with the broad use of modern computer equipment. The automation of the design process permitted complicated tasks in analyzing and optimizing the parameters of the aircraft and its theoretical contours to be solved. The use

of computer equipment provided an opportunity to optimize the power-plant diagrams, which were being designed, and the spatial kinematic diagrams; to carry out an automated weight inspection; and to program the mechanical processing of items on machine tools having numerically programmed controls. Thanks to the use of the program for designing the external contours, we managed to provide for the analytical smoothness of the wing surface with its extremely complicated aerodynamic form and to considerably raise the precision of the bindings of the jig rigging for individual assemblies and mobile elements in the design in comparison with the traditional molding-template method.

As a result of the theoretical and experimental research that was directed toward obtaining high aerodynamic qualities, a wing was selected which had a large elongation and moderate sweep and which was formed by supercritical sections with a large relative thickness. The supercritical sections, which were developed jointly with TsAGI [Central Aero- and Hydrodynamic Institute], and the distribution of their relative thickness along the wing span were carefully worked out in the overall spatial diagram of the flow over the airfoil with the pylons and engine nacelles. This permitted a non-critical flow over the airfoil under flight cruising conditions.

A great deal of attention was devoted to reducing aerodynamic resistance. A negative aerodynamic twist was given to the wing in order to reduce the induced drag and specially contoured surfaces were mounted on the wing tips. The external lines in the areas where the wing and tail unit join the fuselage and where the motor nacelle pylons join the wing were optimized. The quality of the external surface was improved and the number of exterior items (antennas, sensors, probes, etc.) was reduced to a minimum, and their aerodynamic form was improved.

In order to reduce losses of aerodynamic quality during trimming, the flight is carried out under cruising conditions using small reserves of stability. This permits the load on the horizontal tail assembly and fuselage to be reduced. The aircraft's rear center-of-gravity position is assured by a system for transferring fuel from the wing tanks to the keel tank. When doing this, it is possible to change the center-of-gravity by almost 10 percent of the wing aerodynamic mean chord. The return transfer of the fuel to the wing tanks is done by descending from the flight altitude and is completed before the plane arrives in the area of the landing airport.

New aluminum design alloys with improved physical, mechanical and operating life characteristics, aluminum lithium and titanium alloys, new steels and modern composition materials — coal, organic, fiberglass, and hybrid materials — have been widely used in the design of the aircraft. The use of non-metallic materials in the design of the aircraft and its interior has permitted a gain of approximately 1,200 kilograms to be obtained in weight.

The use of long semi-finished items and large-size sheets has permitted the outboard wing panel to be made without joints and the number of joints on the fuselage to be considerably reduced. As a result of this, the weight of the design has been reduced and the quality of the aircraft's external surfaces has been improved. Special attention has been paid to increasing the corrosion resistance of the design. The circuit design of the heat and sound insulation equipment has been improved, drainage vents have been installed in the lower part of the pressurized cabin, and the lacquer and paint covering has been strengthened.

In order to insure an opportunity for the aircraft to operate from airports with a runway length that does not exceed 2,500 meters and to satisfy ICAO noise requirements on the ground, the plane is equipped with powerful wing mechanisms — double-slotted flaps with a large roll-back action and leading-edge flaps along the entire wing span. The internal sections of the flaps are deflected during flight. The mechanization of the wing insures the achieving of large lift coefficients with sufficiently high aerodynamic qualities. Automatic and manual control of the wing mechanisms is provided.

The interceptors are deflected automatically during the landing run of the aircraft. This causes a sharp fall in the lift of the wing and insures a full load on the main undercarriage supports.

The power plant of the TU-204 consists of two PS-90A turbofan engines that were developed by the design bureau under the direction of Chief Designer P. A. Solovyev. The engine has a modular design, an electronic regulation system and systems developed for diagnostics and built-in control which provide an opportunity to service it based on its condition and to quickly restore its working capacity.

Main Systems

All of the aircraft's systems have been designed based on new principles and the broad use of digital equipment. New and original technical solutions have been used in the majority of them. The assemblies of all the systems were developed at a high technical level and satisfy the strict requirements for reliability and weight. The systems have optimum redundancy and are equipped with built-in monitoring systems.

An electric remote system for controlling the aircraft with digital computers insures the best aircraft stability and control characteristics under all flight conditions and prevents going beyond the operating limits. Central Y-shaped controls with small movement have been mounted along with the traditional control-wheel columns in the crew cabin. Pressure on the controls and pedals is created by spring loading. The deflection of the control levers from their central positions serves as a command signal for the electric remote control system.

Level flight is accomplished when the controls are in the central position and the trimming of the aircraft is provided for automatically by the deflection of the stabilizer.

The basic digital circuit of the control system has three independent channels and is redundant with a 3-channel analog circuit.

The deflection of the aircraft's control surfaces — the stabilizer, elevator, ailerons, and interceptors — is accomplished using hydraulic servomechanisms. They have a high efficiency coefficient and reliability and a long service life. All told, 30 steering gears of three standard sizes are used in the control system.

The system for retracting and lowering the flaps and the leading-edge flaps assures the synchronous deflection of all sections by means of a mechanical transmission. The large recoil of the flaps at a small angle of their deflection is caused by the complicated shape of the guard rails. Each hydraulic turning action drive, which is used in the wing mechanization system, operates from two independent circuits in the aircraft's hydraulic system.

A piloting and navigational equipment set has been mounted on the aircraft which permits automated flight along the optimum programmed trajectories during all stages of the flight from take-off to landing as well as landing under the third ICAO category. The set consists of automatic pilot and flight control systems, systems that warn of critical conditions and a dangerous approach to aircraft and the ground, radar navigation and landing systems, and a storm-warning radar.

Digital computer systems and sensors are used in the piloting and navigation set. The exchange of information is done over coded communication lines. Integrated control panels and displays of the flight parameters on the screens of colored cathode-ray tubes are used. An automatic preflight check of the aircraft's fitness is provided for.

The radio communications set insures a search-free automatic establishment of communications with ground dispatcher points in the high-frequency and very-high-frequency bands.

The undercarriage of the aircraft has been executed using a traditional three-support schema. The main supports have dual-axle bogies with four brake-wheels with radial tires measuring 1070x390 millimeters. Each brake-wheel is equipped with monocarbon brake discs and two independent groups of brake cylinders with an autonomous pressure feed from different circuits in the aircraft's hydraulic system. The use of wheels with monocarbon disc brakes has permitted the weight of each wheel to be reduced by 50 kilograms and has significantly (more than twofold) increased service life in comparison with cermet brakes.

The front undercarriage support has wheels with tires measuring 840x290 millimeters. It is retracted forward against the flow. The forward support's recess flaps are connected with the support by a kinematic mechanism having few members. The recess flaps of the main supports, which are retracted in the direction of the aircraft's axis, have separate retraction and lowering hydraulic cylinders.

Besides the main system for retracting and lowering the undercarriage supports, a redundant system for lowering, whose hydraulic cylinders work on a different circuit in the aircraft's hydraulic system, is provided. In order to insure the lowering of the undercarriage under all conditions, the locks for the selected position of the supports have a positive hook drive with three hydraulic cylinders that operate on independent circuits in the hydraulic system.

The electrically controlled remote braking system has two equivalent channels — a main one and an alternate one. They operate from independent circuits in the electrical and hydraulic systems that provide the autonomous pressure feed to the independent groups of brake cylinders on each wheel. The automatic switching on of boosted braking and the inclusion of the alternate circuit for the initial braking of the aircraft are provided.

The system for controlling the turning of the front wheels is also electrically remote controlled. It consists of two independent circuits with rod hydraulic cylinders and an autonomous electrical and hydraulic power supply. The wheels can be turned 10 degrees using the pedal controls and 70 degrees using the control handle mounted on the side panels of the pilots.

The aircraft's hydraulic system, in which NGZh-4 non-inflammable working fluid is used, consists of three independent circuits. The operation of each one of them is provided for by variable output main pumps driven from the aircraft's engines (in the second circuit, there are two pumps using different engines) and electrical pumping stations. The first circuit has an additional pump driven by an air turbine that is let out into the external flow in the event the engines break down. The maintenance of the optimum temperature conditions in each circuit of the system is provided for by a temperature valve that lets the heated working fluid through the heat exchanger.

Original thermo-mechanical pipe connections based on "metal memory", detachable hermetic joints with an internal cone and spiral pipes with a high service life are used in the hydraulic system. In order to maintain the working ability of the hydraulic system's circuits in the event of damage to the main lines going to the main pumps in the engines, shut-off cocks are used in the feed line and check valves in the delivery line. The operation of the circuits insures a remaining reserve of working

fluid thanks to the fact that the fence pipes for feeding the electrical pump stations are mounted in the hydraulic reservoir at a lower level than the pipes for feeding the main pumps.

The main electrical power supply system is alternating three-phase current with a voltage of 200/115 and a frequency of 400 Hertz. The secondary system is 27 volt direct current. They have been executed in the shape of two independent functional subsystems. A hydraulic drive generator with a capacity of 90 kilovolt-amperes, which is mounted on the engine, is the electric power supply source in each main subsystem. An alternating current generator, mounted on an auxiliary power plant, and four storage batteries (two in each secondary subsystem) are the reserve power supply sources. Static converters of direct current into alternating current are used for forming a third autonomous circuit for powering the electrically remote controlled control system of the aircraft and provide emergency power to the consumer when the main generators break down.

Electrical wires with insulation, which does not support combustion, are used in the on-board electrical network. The separation of the wires in the multicircuit systems insures the elimination of interconnected electrical communications.

The external lighting equipment corresponds to today's technical level in its composition, technical characteristics and functions performed; and it satisfies international standards. Quartz halogen lights are used as light sources.

The air conditioning system has been built using the open air cycle principle using a three-wheel cooling turbine machine on gas supports and with the removal of moisture on the high pressure line. This permits the cooling effect of the system to be considerably increased on the ground and at low flight altitudes and also insures the rapid preparation of the aircraft for flight during the summertime. The extraction of air from the engines is accomplished by switching on stages in order to maintain a stable flow rate of the air in the system during all flight stages, including descent when operating the engines on low power. Ventilation of the passenger cabin is assured by supplying 30 kilograms of air an hour for each passenger to the compartment. Recirculation of the air is being provided for. Removal of air from the passenger cabin is accomplished through slots between the window panels and the heat and sound insulation. This warms up the internal surfaces of the walls and improves comfort for passengers sitting near the windows.

The autonomous system for cooling the radio-electronic equipment, which is mounted on racks in the equipment compartment, has been carried out using a closed circuit in order to prevent dust and moisture getting in. The external casing of the fuselage is used as the radiator for cooling the air.

The automatic pressure regulating system maintains pressure in the hermetically sealed cabin in accordance with the law that corresponds to the comfort level (including during rapid altitude changes within the limits of the aircraft's energy capabilities).

The aircraft's fuel system, which works automatically (with the possibility for manual control of the cocks and pumps), provides for the separate feeding of each engine, the operation of the auxiliary power system, and the transfer of fuel from the wing tanks to the keel one and back. In the automatic mode, the control of the fuel system's pumps and cocks and of the fuel transfer is carried out by a complex for measuring fuel and determining the aircraft's mass and center-of-gravity. The fuel reserve for a flight is stowed in caisson wing tanks. Centralized fueling of the aircraft is provided, and the emergency discharge of fuel is not provided. Jet-type pumps have been mounted in the tanks in order to use up the fuel completely and to prevent the accumulation of moisture in them. This, in combination with the warming up of the fuel filters, permits the necessity of checking for fuel sediments after refueling to be eliminated.

Pumps mounted inside the tanks with easily dismantled connections to the fuel line are used in the fuel system. Piping sections outside the tanks have been eliminated. Instead of the traditional piping, wing longitudinal load-bearing elements, which have a closed profile, are used in the fuel tank drainage system.

A compact cabin, which is designed to accommodate two pilots and a flight engineer during the flight, has been designed on the basis of modern ergonomic norms and new designer approaches that are connected with the use of electronic displays and aircraft automatic control systems. The principle of a "dark cabin" has been realized. All of the information, which the crew needs to pilot the aircraft and monitor the operation of on-board systems, is displayed on six multicolored cathode-ray tube screens. Light buttons on the system control panels light up only in the event of a breakdown in the systems. General illumination of the cabin does not exist, but the lighting of individual areas is provided for. The integrated information signaling system provides current information on the operation of the engines and flight systems and warning signals and recommendations for crew actions in the event of a breakdown on two screens, which are located on the central instrument board of the pilots. Information on the status of each of the aircraft's systems is displayed in the form of mimic panels that correspond to the structure of the system. Individual units are singled out in a mimic panel. Color coding is used to indicate the operating condition of the units.

The overall bluish gray interior of the crew cabin insures a favorable mood and contributes to a clearer display on the indicators. The black color of the Y-shaped control stick, of the levers for controlling the engines, the handles for lowering the air brakes, and the handle for

controlling the turning of the front wheels harmonizes well against the overall background of the cabin. Comfortable pilot seats with upholstery made of natural sheepskin have an electro-mechanical adjustment for setting it at the fixed position of the pilot's eyes.

The ergonomic support of the crew's work conditions permits the psychological and physiological strain to be reduced and contributes to an increase in the level of flight safety.

Distinctive Features of the Lay Out

The design of the passenger cabin provides for different versions: a single tourist class, a mixed version (with a first class) and a version with three classes (first-class, business-class and tourist-class).

New and more comfortable seats with a large spacing between rows have been mounted in the compartment. The distance between the seat armrests and the window panel of the interior has been increased. There is a wide central aisle. The baggage shelf is a spacious one. All of this, as well as the efficient system for distributing the conditioned air and the use of a water vacuum system for removing wastes, insures a high level of passenger comfort.

The interior elements of the passenger compartment have been executed from decorative and ornamental materials that satisfy international fire safety standards. The supplying of oxygen to each passenger seat has been provided. The oxygen masks can be accommodated in the baggage shelf or in the backs of the passenger seats.

Four exits from each side of the aircraft (entrance doors measuring 1850x840 millimeters, service doors on the right side measuring 1600x650 millimeters and two emergency exits on each side measuring 1440x610 millimeters) provide for the satisfaction of international standards for emergency exiting of an aircraft when there is the maximum number of passengers. Emergency inflatable escapes chutes are accommodated in containers on the inner side of the doors. The main baggage of the passengers and cargo are accommodated in AK-0.7-type containers, which are carried on the aircraft's lower deck (there are five containers in the forward compartment and seven in the rear compartment). The loading and unloading of the containers is carried out with the help of a mechanized system.

Operating Conditions

When designing the TU-204 aircraft, a great deal of attention was paid to improving the operational adaptability to streamlined production and to simplifying maintenance systems. Maintenance principles based on conditions were placed at the basis of the maintenance system developed. Every step was taken to increase annual flight hours and to insure high flight regularity.

Operational maintenance of the TU-204 provides for performing the work in two forms. In accordance with form A, the preparation of the aircraft for a second flight is done using a minimum of ground maintenance systems and with a total duration of the work of up to 30 minutes. In accordance with form B, the elimination of detected faults is carried out. This is done at a base airport after 25-30 flying hours or 10-12 flights but no less frequently than every two days.

Periodic maintenance of the aircraft provides for performing the work in a base airport using three forms. According to form No 1, adjustment, lubricating and cleaning work with the external washing of the aircraft is performed after each 300 flying hours. In accordance with form No 2, an inspection of the load-bearing units and assemblies using nondestructive monitoring, routine repairs of the equipment in the cabin and cargo compartments, and the replacement of system assemblies in accordance with service life is carried out under hangar conditions after each 3,000 flying hours, but no less frequently than once a year. In accordance with repair form No 3, a thorough inspection of the airframe and on-board systems, the replacement of component items that have completed their service life, and other work are carried out under hangar conditions after 9,000 flying hours.

In a word, the designers of the aircraft have taken every step to insure high profitability and convenience in operation in the final analysis. We hope that the TU-204 will receive a positive rating from passengers and aviation enterprise workers.

Main Characteristics of the TU-204 Aircraft

Wing size, meters—42

Fuselage length, meters—45

Fuselage cross-section, meters—3.8x4.1

Maximum take-off weight, tons—93.5

Maximum commercial load, tons—21

Number of passengers (with an 810-millimeter seat spacing)—214

Type of engine—PS-90A

Number of engines—2

Cruising speed, kilometers per hour—810-850

Required runway length (under calculated conditions: air pressure — 730 millimeters of mercury, temperature— 30 degrees Celsius), meters—2500

Landing category (according to ICAO)—Third

Main Characteristics of the PS-90A Engine

Type—Turbopan

Compression ratio in the compressor—32

Temperature of the gases in front of the turbine, degrees Kelvin—1565

Static thrust, tons—16

Specific fuel consumption under cruising conditions (altitude—11 kilometers, speed—0.8 Mach). Kilograms per kilogram-force per hour—0.58

Weight of a dry engine, kilograms—2800

PHOTO CAPTIONS

1. p 28. Various configurations of the TU-204 aircraft's passenger compartment.

Aircraft configuration, side view.

Tourist class with 214 seats (seat spacing is 810 millimeters)

Mixed version with 196 seats. First class — 12 seats (seat spacing is 990 millimeters); tourist class — 184 seats (seat spacing is 810 millimeters).

Mixed version with 174-190 seats. First class — 12 seats (Spacing of the seats is 990 millimeters); business class— 17-25 seats (spacing of the seats is 960 millimeters); tourist class — 137-162 seats (spacing of the seats is 810 millimeters).

Cross section of the first class compartment (width of the seat unit — 1,370 millimeters; width of the aisle between the rows — 730 millimeters).

Cross section of the tourist and business class compartments (width of the seat unit — 1,520 millimeters; width of the aisle between the rows — 470 millimeters).

COPYRIGHT: "Grazhdanskaya aviatsiya"

08802

MARITIME AND RIVER FLEETS

Maritime Fleet Minister on Restructuring
18290059 Moscow MORSKOY FLOT in Russian
No 11, Nov 87 pp 2-4

[Interview with Yu. Volmer, USSR minister of the maritime fleet, by V. Gordesychik; date and place not given; first seven paragraphs are MORSKOY FLOT introduction]

[Text] Restructuring is a continuation of a task that was begun by our revolution. The correctness of these words is being sensed especially strongly today when we are celebrating the 70th anniversary of Great October.

A path, equal to centuries, has been covered by our country during these years. It has been transformed from a backward semifeudal one into a highly developed mighty power — into the world's most important center for scientific and technical progress and culture. Striking changes have occurred in all areas of our life. Unemployment and poverty have passed once and for all into the past. The development of Soviet society's political system has achieved a level unheard of before.

The country's maritime transport has been developed along with it. Branch workers have always marched in step with the party and the people — during the days of struggle, testing and victories.

Time, however, is throwing down new challenges. A critical period — a period when economics is being tested for its effectiveness; for its receptivity to everything new and progressive in science, equipment and technology; and for its ability to produce products of the highest quality — has arrived when the entire Soviet way of life is being tested for its ability to steadily enrich the values of socialist democracy and humanism and to expand the people's sovereignty and social justice. And foreign policy — for its support, steadfastness and consistency in the struggle for a world without weapons and wars.

The time for words has passed. Today, everyone must demonstrate fidelity to the policy of restructuring and to the policy of the April 1985 CPSU Central Committee Plenum and the 27th Party Congress in deeds — primarily in the area of radically restructuring the management of the economy and the entire economic mechanism.

It was no accident that the June 1987 Central Committee Plenum pointed out that this task is the central one that will determine the success of the strategy of acceleration. Its realization is an integral part of the process of renewing the country's life and a direct continuation of October's cause.

At the request of the editors, Yu. Volmer, USSR minister of the maritime fleet, talks about what has already been done, is being done, and will be done in this direction with respect to maritime transport.

[Question] Yuriy Mikhaylovich, evidently it is already possible to sum up some results since the shift of the branch's shipping companies and enterprises to complete cost accounting and self-financing on 1 January of this year?

[Answer] Of course. An analysis of work during the first eight months shows that the shift to the new management conditions has increased the interest of the shipping companies and enterprises in improving the effectiveness in using fixed capital, in reducing stocks of commodity and material valuables, and in freeing themselves more energetically from obsolete and unused equipment. The introduced system of direct contracts with customers insures the steady and complete satisfaction of the national economy's shipping requirements.

All of this has contributed to the branch's fulfillment of the main planning indicators. Today, however, not that, which has been done, but that, which it is necessary to do, interests us more — the more so since it is necessary to say frankly that the progress cannot satisfy us when we evaluate the state of affairs in general regarding restructuring in the branch in light of the requirements of the June 1987 CPSU Central Committee Plenum.

[Question] How is this being manifested specifically?

[Answer] Primarily in the main work avenues that have been adopted by us — increasing the effectiveness in using the main producer goods and radically improving the fleet's shore services.

An analysis shows that the use of the fleet has worsened. For example, in comparison with the corresponding period of last year, the fleet's unproductive demurrage has grown by almost five percent.

Or, how much has been said and written about the fact that the shore must turn its face to the fleet! The cart, however, is now there — as they say. You see, shore services are not only a factor that influences production but they are also a political one. That is why some of the directors, who promise to put things in order but who do not carry out their promises, can lose the sailors' trust. This is already barely remediable.

As before, the work rhythm and stability of the shipping companies are not being assured. Unfortunately, a number of them are not coping at all with their plan quotas. In particular, the Baltic and Soviet Danube shipping companies have been lagging behind for a long time in foreign voyages. The Azov and Soviet Danube shipping companies did not fulfill the eight-month plan for coastal navigation. Shortfalls exist in the delivery of goods to the rayons of the Far North, and we are not coping with the planned delivery volumes for pipes, raw sugar, alumina, bauxite, and several other goods.

There has still not been a fundamental improvement in construction matters. The fulfilling of the plans is taking place with great effort and uncertainty until the last days of

each reporting period. The chiefs of the shipping companies are changing their attitude toward the solution of social problems slowly. That is why the construction of housing, which was planned for commissioning, is often being disrupted. This has occurred in the Far East, Novorossiysk and several other shipping companies this year.

As before, the accident rate in the fleet is great. Having examined the state of affairs since the tragic death of the Admiral Nakhimov steamship, the ministry's Collegium admitted that the state of affairs with respect to navigation safety is unsatisfactory. A great deal of organizational work has been done and there are some changes for the better, but the overall result cannot satisfy us yet.

[Question] However, there are evidently objective reasons among the causes of these negative phenomena?

[Answer] Of course. However, one should not forget that so-called objective reasons are often engendered by the specific underfulfillment of work by specific people. That is, they essentially have a subjective nature and are connected with insufficient activation of the human factor. Many directors — both in the ministry and in the shipping companies — should think about this.

Take, for example, coordination with cooperating partners. I am convinced that no matter how we put the blame on our colleagues from other ministries, the interruptions that arise at the junctions of the transport conveyor are mainly caused by a lessening of our attention toward this problem. This is especially typical for the ferry crossings on the Caspian and Baltic.

We are not extending communications with our cooperating partners along party committee lines. You see, this was a good way for conducting joint meetings of the Ministry of the Maritime Fleet's party committee with the party committees of other ministries at one time. The same thing applies to the Ministry of the Maritime Fleet Collegium also. Incidentally, it is necessary to point out that the quality of the contracts, being concluded with cooperating partners, is far from being perfect and, you see, this is one of the main instruments for fulfilling plans.

Of course, there cannot exist any "objective" justifications when solving such very important tasks as the overcoming of drunkenness and alcoholism. An analysis shows that the number of violations, connected with this evil, has practically not been reduced among the sailing crews in the Sakhalin, Primorye and Latvian shipping companies. This also pertains to many shore enterprises.

Instances of the use of alcoholic beverages by students in the branch's training institutions are especially alarming. An increase in them has recently been noted in the OIIMS [Odessa Institute for Maritime Fleet Engineers], LVIMU [Leningrad Higher Engineering Maritime School], NVIMU [Nikolayev Higher Engineering Maritime School], and the Arkhangelsk, Leningrad, Odessa, Riga, and Sakhalin navigation schools,

The unsatisfactory state of affairs in the struggle against drunkenness and alcoholism in a number of the branch's collectives is explained by the fact that the directors of enterprises, the command complement of vessels and the trade union committees have reduced the solution of the problem of eradicating this social evil to a temporary campaign; having achieved certain positive changes in the beginning, they became complacent.

Evidently, the responsibility of the primary directors for this and for all of the other work sectors, which have been listed by me, is still weak not only on the part of the ministry's Collegium but also — which is no less important — on the part of the work collectives.

[Question] Yuriy Mikhaylovich, everything, which you have said leads to a simple conclusion: Restructuring has still not completely touched work style.

[Answer] This, perhaps, is to put it mildly. The rates in the restructuring of our work style are clearly insufficient. There is still little lively work with people; formalism, paper generation, a low level of executive discipline, a lack of self criticism, and a desire to avoid specific responsibility still exist. Unfortunately, one often encounters all of these in work practices both in the ministries and in the local areas.

[Question] Can these be defined concretely?

[Answer] I would mention three — in my opinion — primary items which must be considered when restructuring psychology and work style.

First, the overcoming of the stereotypes in thinking and actions, which have taken shape under the conditions of the shift of the branch's enterprises to economic management methods. This is being carried out extremely slowly today. Inertia, the lack of initiative, a consumer attitude toward finance questions, and the habit of relying on centralized help when plans are not fulfilled, which exist among a considerable number of workers in the administrations and associations of the ministry, shipping companies, ports and ship repair yards, have still not been overcome.

Second, the knowledge of the leading workers at the center and in the local areas of the main work principles in complete cost accounting and self-financing is still poor. The proposals for redistributing the fleet and other producer goods between enterprises when fulfilling the plan and the requests about adjusting production and financial indicators, allotting additional financial and material resources, etc., which arrive in the ministry, testify to this. We are talking not only about a lack of knowledge but also — what is even worse — about an unwillingness to learn and about a frivolous attitude that borders on irresponsibility and incompetency. This is how we will regard such requests in the future.

Third and finally, the work to improve multiple economic estimates — from the shipping company (enterprise) as a whole to the crews of vessels; to the collectives of transshipping complexes, ports, workshops, and sections; and to brigades — is being performed slowly in the shipping companies and enterprises of the branch. A system of indicators and economic norms at the level of the shipping company (enterprise) as a whole is in effect — and the directors are resting easy as if they do not notice that the work in crews or brigades is being conducted as it was last year or the year before last.

[Question] Perhaps it is simply that they lack the knowledge or the information?

[Answer] This, of course, has an effect. Although I must admit that I personally have had frequent occasions to encounter an unwillingness to learn something new and the custom of managing with old baggage.

In any event, increasing the economic knowledge of personnel is an indispensable condition for the success of restructuring. In carrying out the shift of the shipping companies and enterprises to complete cost accounting and self-financing, we were practically convinced of this. I must say right out that the level of economic knowledge among many is poor.

The certification of shipping company chiefs, which was conducted on cost accounting questions, has shown that many are "drifting" here; there are cases where they do not even know what return on investment and profitability mean.

And, you see, we have so many different forms of economic training! Evidently, their weakness lies in the absence of unity with practice. In the economic education system, there is still quite a bit of scholastic enlightenment that is separated from the actual problems of the branch. All of this hinders the overcoming of inertia in thinking and the formation of the viewpoint of an active participation in restructuring among people.

In order to fundamentally change the state of affairs, it was decided to give concrete definition to this work by organizing a distinctive type of economic universal compulsory education both in the staff of the ministry and in the entire branch. Training programs for raising personnel qualifications will be reviewed and measures will be planned to improve economic training in our higher educational institutions, to use the different forms for exchanging the experiences of directors at all levels for these purposes, etc.

[Question] Yuriy Mikhaylovich, as is known, one of the main tasks, posed by the June 1987 CPSU Central Committee Plenum is the restructuring of the state planning system. How is it being carried out in maritime transport?

[Answer] The shift to economic methods for the economic activity of enterprises, which are based on control figures, long-term stable economic norms, and state orders and allocations, is the central item here.

In carrying out this strategy, we must insure an optimum combination of centralized planning guidance and enterprise independence. It is necessary to improve the mechanism for compiling plans for the economic and social development of the branch and to firm up the functions, rights and duties of those who assure their fulfillment.

This, however, is the organizational aspect of the task. An improvement in planning quality is fundamentally important for us today. You see, unfortunately, we often talk about problems in fulfilling a plan, leaving the quality of its formulation in the shadows.

Everything has not turned out well for us during the shift of the shipping companies to complete cost accounting and self-financing, especially in the area of economic norms. That is why a very important task is to develop a strategy for these norms during the next five-year plan so that the effectiveness of the new management mechanism will be assured.

[Question] Is the requirement to accelerate scientific and technical progress in the branch being taken into consideration during the restructuring of the planning system? You see, this is the main factor for economic growth.

[Answer] Of course. Moreover, questions concerning scientific and technical progress must permeate the entire planning system and become inseparably linked with it. Even here, it is fundamentally important to master specific economic questions of scientific and technical progress in maritime transport. We must know the availability of what is new and be able to develop and incorporate it.

Unfortunately, the summation of progressive experience and its purposeful dissemination are being carried out poorly; consequently, it is not fully being transformed into plans. That is why our plans are poor from the point of view of formation and the actual consideration of scientific and technical progress. This means that they do not fully assure the required rate of social and economic development.

So as not to make unsubstantiated statements, I will cite an example. In front of me is a letter from the chief of the technical information bureau of the port of Nikolayev. He writes that in a conversation with the chief engineer of one of the vessels in the Black Sea Shipping Company he found out that the latter had 18 inventions protected by author's certificates. However, they had been incorporated only on those vessels where the inventor sailed although they are deserving of widespread dissemination in the fleet.

Why did this happen? The shipping company had received them, approved them and paid the customary author's award. Even if it was incorporated on only one vessel, it is

possible to report that the invention worked successfully and ... to forget about its further dissemination. This is what they did in the Black Sea Shipping Company. As they say, it is signed — and that's done, thank goodness.

In such a situation, scientific and technical progress will never become the basis for economic growth. That is why the economic mechanism must force a search for and the widespread introduction of inventions and scientific innovations. The task of the BVFU [Planning and Currency Finance Administration], NTU [Scientific and Technical Administration of the Ministry of the Maritime Fleet] — along with other administrations, associations and the shipping companies — is to establish a planning system at whose basis would be the use of the achievements of scientific and technical progress. This is not a simple task, but we must cope with it.

[Question] The shift of the shipping companies and enterprises to complete cost accounting and self-financing and the new tasks and functions of the ministry require an improvement in the entire system for managing the branch. I would like you to talk about what is being done in this direction.

[Answer] Before talking about the new general schema, I would add to the factors, which you have listed, another one that we should not forget: During the current five-year plan and subsequent ones, the branch will be expanded under the conditions of reducing the fleet tonnage and labor and other types of resources while shipping requirements are increasing at the same time. This situation makes a sharp increase in the effectiveness of using resources vitally necessary.

The solution of this task under the conditions of the shipping companies working under complete cost accounting and self-financing and the freeing of the ministry from the functions of operational control of the transport process requires the coordination of technical assets and technological processes in the basins by enlarging the structural elements of the management system.

Let us say right out that the question is not a simple one. That is why a special commission for preparing proposals to firm up the general schema for managing maritime transport was formed based on a decision of the Ministry of the Maritime Fleet Collegium. The work of the commission was carried out with the broad participation of not only the ministry's staff but also representatives from scientific institutions and the shipping companies. The differing points of view were rather widely discussed in the press. The directors of the Ministry of the Maritime Fleet traveled to the Far East and to the Baltic Shipping Company to examine possible versions for management directly in collectives.

As a result of the detailed analysis, we came to the conclusion that the existing management system in the basins is close to an optimum one and permits the tasks facing the branch to be solved.

In order to find ways to further improve the general schema, the ministry's Collegium recognized that it was advisable to establish a State Production Association for the region's maritime shipping companies in the Far East basin on 1 January of next year. The DVMP (Far East Shipping Company) will be the leading one. The status of the enterprises, included in the production association, will be determined by the labor collectives.

A similar production association — the Central Asian one (SPO) will begin to operate in the new year based on the Central Asian Shipping Company.

In other basins, it is recognized that it is advisable to maintain the existing schema, planning closer coordination of the activity of the shipping companies with the help of a basin association system (conferences).

[Question] How is the structure of the ministry staff being changed?

[Answer] This work has still not been fully completed. That is why it is still only possible to talk about the principles on which the new structure will be based: the transfer of the operational guidance functions for the work of the fleet, ports and ship repair yards to the local areas and the concentration of the ministry's activity on solving fundamental questions concerning the future development of the branch and the establishment of conditions for the effective operation of the shipping companies and enterprises; the concentration of functions and the reduction of their fragmentation in subunits based on this; the preservation of the continuity of the existing structure to the highest possible degree; the consideration of personnel potential; and the priority of the functions of a scientific, technical, planning, and economic nature in the central staff.

The structure in amalgamated form has been approved by the Collegium. However, very much work remains to be done for its internal "filling", the firming up of the positions of the subunits, etc.

I only want to point out that we have tried, on the one hand, to preserve everything that has proven itself in practice, to save as much personnel potential as possible and to insure continuity; on the other hand, we have tried to make the structure as responsive to the new tasks and changed functions as possible.

[Question] Incidentally, concerning functions. The transfer of a portion of them from the central ministry staff to the shipping companies and enterprises in connection with the expansion of their independence will inevitably require a reduction in the staff....

[Answer] Naturally, this concerns not only our branch. I think that it is no secret to anyone that the management staff has swelled so much during recent decades that it has, at times, proven to be unmanageable and gradually became bureaucratic, more and more shifting from the solving of future tasks to petty guardianship of the enterprises, thus hindering their initiative.

The situation is radically different now. Under the new management conditions, there will simply be nothing for some people to do at their old positions. That is why a reduction in the staff is an objective necessity.

How this will be done — is another matter. You see, we are talking about living people — about their fate. At times, it is not sufficient to look before you leap. Perhaps, there is only one path here — to consider the opinion of the labor collectives as much as possible. Incidentally, we are also checking at the same time how much we have learned during recent years in living and working under the conditions of democracy.

[Question] The more so since the widespread development of glasnost, the use of democratic management forms and the election of directors are a mandatory condition for the successful carrying out of all reforms in the economic mechanism.

[Answer] I would add: And restructuring as a whole. Not only a condition, but also an organic component — one without the other is simply impossible.

The words, spoken during the first years of Soviet power by Feliks Edmundovich Dzerzhinskiy — at the time, the chairman of the VSNKh [Highest National Economic Council]: "... For our central staff to operate with the accuracy of a watch mechanism, the local areas must have the right to raise their voice and object ..., " ring urgently today.

Today, anyone of us — from the ordinary worker to the minister — must simply work with October's acceleration and conscientiously. You see, we are also answerable to history — to those who lived, struggled and labored seven decades ago. We are responsible for the future make-up of the branch and the country and for the fate of socialism.

When thinking about the future and about our prospects, one can in no way forget about the solution of today's tasks — the tasks of the present, very important and extremely difficult year, the second year of the 12th Five-Year Plan and the year of the 70th anniversary of Great October.

COPYRIGHT: "MORSKOY FLOT", 1987

08802

END

END OF

FICHE

DATE FILMED

31 May 88